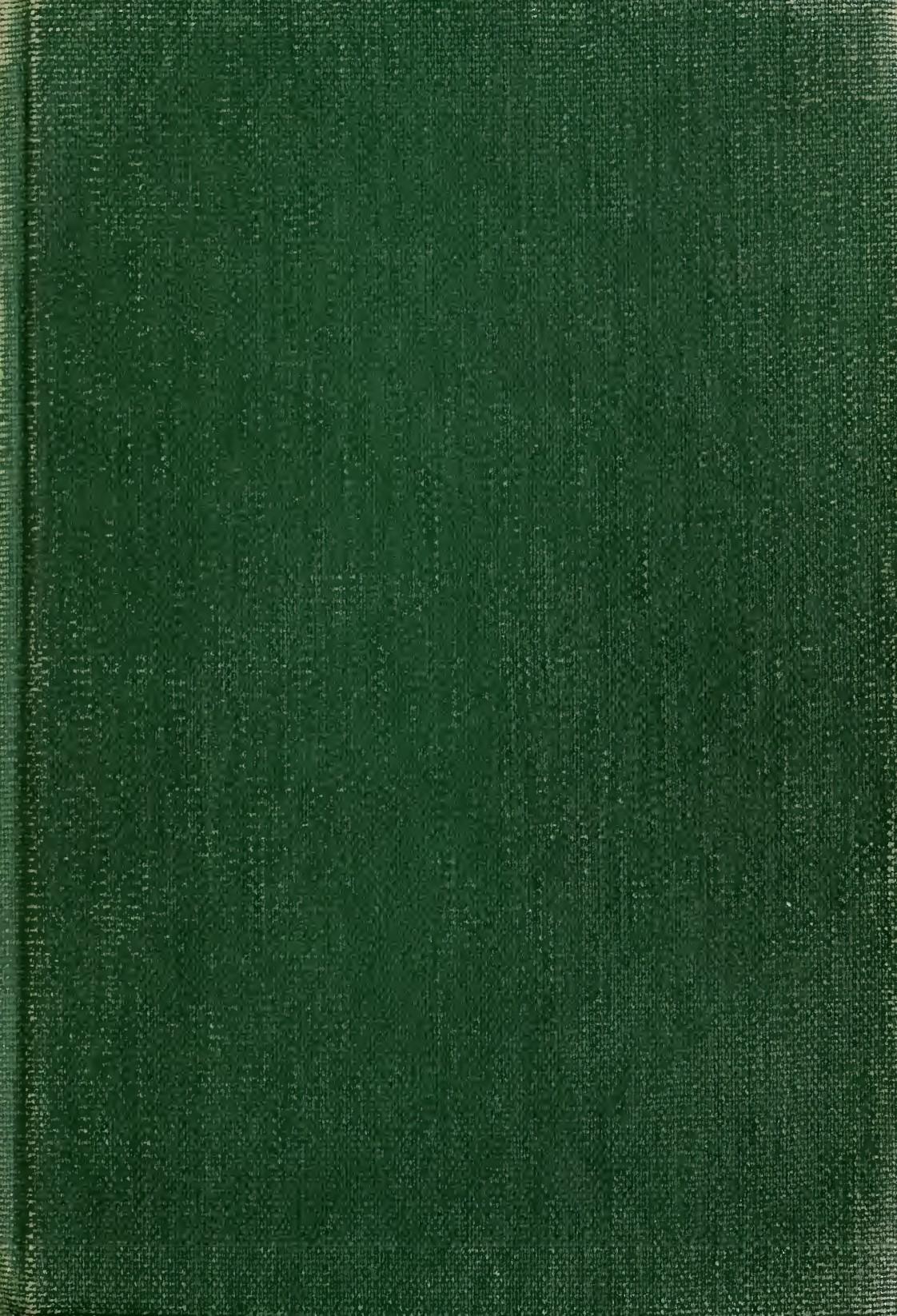


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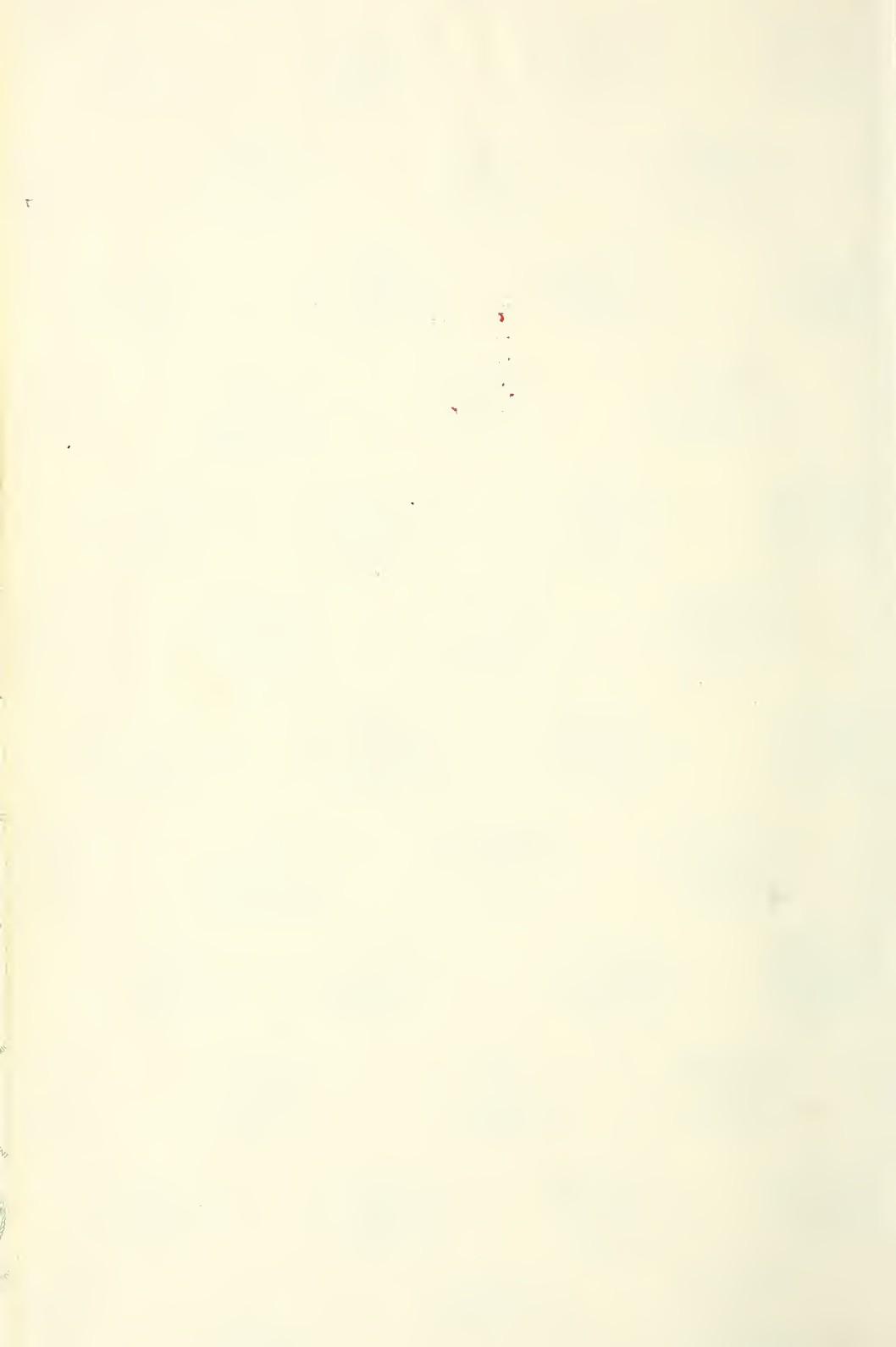
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THE GERMAN SHEPHERD DOG IN WORD AND PICTURE

BY

v. STEPHANITZ

PRESIDENT OF THE „VEREIN FÜR DEUTSCHE SCHÄFERHUNDE, SV.“

AMERICAN EDITION

REVISED FROM THE ORIGINAL GERMAN WORK BY

J. SCHWABACHER

SECRETAINERIE KENNELS, AUERBACH, HESSEN

FOR THE SOLE AMERICAN COPYRIGHT OWNER

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PRINTED IN GERMANY

BY

ANTON KÄMPFE, JENA

1923

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Headquarters at Munich.*

*The cover-illustration represents a fine head study of the
well known show and working dog
ALARICH VON JENA-PARADIES S.Z. 79614 SchH.
bred by Mr. OTTO KÄMPFE of JENA.*

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P R E F A C E

My chief aim in undertaking this task has been to supply the urgent need for a really standard book on the German Shepherd dog, whose sterling qualities are winning him an ever-increasing chorus of approbation, not only in his own land, but from all quarters of the globe as well.

To make this book accessible to his lovers and friends in all English-speaking countries I entrusted the translation from the original to my colleague

the Rev. C. CHARKE, Hon. C. F., M. A. Oxon
who has fulfilled his part with that fidelity both to the text and meaning of the author, which are so important in a work of this description.

It is only fitting that I should say something about the work of the well-known Shepherd dog Connoisseur and President of the Verein für deutsche Schäferhunde, whose activities on behalf of the race have been a labour of unremitting love, extending over so many years.

Rittmeister (Cavalry Captain) von Stephanitz, in conjunction with Herr Artur Meyer of Stuttgart, founded the Verein für deutsche Schäferhunde on the occasion of the Karlsruhe Exhibition in April 1899, and for more than twenty-five years has devoted his energies to the interests of the Shepherd dog, as the first President of the same Society. He has accordingly, so to speak, grown up with the race; he has formed the Statutes of the Society, and this, along with the compiling of his own Stud Book, proclaims him as one of the leaders in this important movement. Further, he is a breeder, who from his own ripe experience, has done more than anyone else to set up and fix those ideals for our dogs which will be a continual challenge and an encouragement to our efforts to improve that which, just because it already has so much, holds out the prospect of all the more.

Rittmeister von Stephanitz is therefore to-day at the head of the greatest and most important Society for the German Shepherd dog, which has a membership of 50,000, and over 500 local branches. It is to the tireless efforts and the wise counsel of our President in all that pertains to breeding and education, that the German Shepherd dog has attained the physical exterior and wonderful fullness of his nature which impress all who really begin to know him. Rittmeister von Stephanitz, in common justice to himself, must be considered as the Authority on the race; on "his" race, one could almost say with equal justice, in the light of what he has attempted and accomplished for it.

Such a work as this from the pen of such an author, will give us all that has to do with the Shepherd dog, described in that most detailed and thorough manner which is only possible from one whose long activities, unwearied service, and unrivalled experience mark him as the essential and ideal lover of the race.

That the results of such work as his may redound to the service of the breed, and prove a source of ever-increasing benefit to the German Shepherd dog, wherever he may find a home, is the heart-felt wish of all the friends and admirers of Rittmeister von Stephanitz, and of

J. SCHWABACHER.

AUERBACH, HESSEN
JANUARY 1923.

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Verein für deutsche Schäferhunde SV.

Registered Society — Place of jurisdiction Munich

(incorporated with the pure breeder's associations and the PVZ)

established 22. April 1899

oldest and wide-extended association of the breed. Largest

and best organised association of any breed in the whole world
comprising over 40000 members and 600 local branches.

Only continental society of the breed officially recognised by

United States Department of Agriculture, Washington, D. C.

Aim of the society. The society was founded by amateurs and amateur breeders and represents the breeding association of the German Shepherd dog and is extended all over Germany and abroad. The society promotes the select breeding, endavours to raise the capacity for work, as well as to consolidate and accomplish the natural utility dispositions of the German Shepherd dog, so to give to the agriculture an indispensable assistant and to the authorities a reliable dog qualified for every service according to his body construction and his disposition. The further aims of the society are: propagation of the fancy for the German Shepherd dog as companion, watch and protecting dog; Eclaircissement and propaganda work for the breed; promotion and protection of its members relating to all questions of dogbreeding and keeping.

1st President of the society is Cavalry Captain v. Stephanitz at: Görlitz the headquarters of the society are at: Augsburg 3.

The activity of the Verein consists of the publication of:

The Standard of the German Shepherd dog and the

Gazette of the society for the German Shepherd dog published 1st and 15th of every month and delivered post free to members of the society. The gazette is the official organ of the society and publishes all questions relating to the internal affairs, gives full show reports, particulars about police work movement, interesting articles on the breed, instructif lectures, illustrations of dogs etc. etc. and is the medium for buyers and sellers through its advertisement columns.

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The SV. edits quite a number of books relating to the breed and other kind of printed matters which can be obtained from head quarters by members.

The SV. patronises Exhibitions all over Germany and furthers the interest of the working capacity of the breed by granting special awards and by holding field trials for

Police work and sheep folding.

Further the Champion titles for the year (Jahressieger) are competed at the Societies Speciality Shows every year for beauty, for police work and sheep folding.

Yearly subscriptions are fixed for America at 5 \$ per annum payable in advance, plus an entrance fee of \$ 1.— for new members.

Applications for membership and all requests and inquiries should be addressed to the:
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Gunda v. Oberklamm
Austr. Siegerin 1921

Ruth v. d. Secretainerie

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American fanciers and breeders who are visiting Europe are courteously invited to inspect my Kennels.

CHAPTER ONE

THE SHEPHERD DOG AND THE HERDSMAN'S DOG; THEIR ORIGIN AND RELATIONSHIP.

"By the intelligence of the dog was the world created."



So says the Vendida, the oldest book of the Zendavesta, in a chapter which treats of "The Creation of the World". The Zendavesta is a compilation of ancient Iranian beliefs. Like all similar traditions, it owes its origin to the process by which popularly accepted sayings and moral principles were committed to writing at a later date. For its material it drew on the bygone civilisation of one of the most ancient of heroic stocks of time immemorial. Notwithstanding that its foundation and its lore are lying far behind those remotely anterior and prehistoric events, this is the source from which we deduce the right to use the motto with which we have commenced our opening chapter. "The World" in

the naturally narrow idea of Zoroaster, which even to-day has not been entirely superseded, and which does justice to man alone, is conceived of as the result of an evolution and development of humanity. We can imagine such thoughts and feelings arising in the minds of a people to whom the dog was not only a well-tried companion and comrade — (an old Persian legal code, the Bundehesch already distinguishes between dogs who roamed in packs and those who were domesticated) — but also, for whom, together with the cock and the fire, he had become the dispeller of evil spirits and of magic, the vanquisher of their enemy, the dark and evil of the night. "His voice destroyed the evil", says the Bundehesch when speaking of the dog.

Zoroaster's theory naturally becomes untenable in the light of modern discovery. Primitive man had already taken the first decisive step on the road that would conduct him to his present elevation when

the dog found his way to his side. Then only did both parties first learn to turn this meeting to their common interest by the institution of a well-founded cooperation based on utilitarian motives, until the higher-developed party came to subdue the other to a position of dependent servility.

The racial beginnings of both stocks — man and dog — can be traced back to the same original period of many, many millions of years ago. The first traces of the prosimians (pachylemuridae) and of the original carnivorous animals (Creodontes), according to the excavations of Ternays near Rheims and in New Mexico, belong to the eozoic, which is the earliest age of the tertiary period. They were established there along with the primitive hooved animals (the Condylarthren) and exhibited at that time the merest superficial differences from the family groups of genuine mammals; one, therefore, is their origin, common their evolution, conjointly they work.

I have just asserted that their evolution was in common. We must, however, qualify our statement, for the genuine dogs (canidae), — in which of course we include the wild dogs, — lag behind in the evolution of the mammal stock. Traces of them were not discovered before the time of the upper pliocene strata i. e. towards the close of the tertiary period about three millions of years ago. The canis Etruscus Major, found in the upper pliocene strata of Tuscany, has been described as the oldest "wolf". According to the calculation of Penk, the glacial period which succeeded the tertiary, lasted for at least $1\frac{1}{2}$ million years; and the latest epoch of the tertiary period, which is called the pliocene, for not less than two million years. The oldest traces of genuine dogs, of which we have definite knowledge by means of excavations, point to a time therefore at which the first presence of "man" is supposed to have taken place, i. e. the period of the transition of the pre-man (proanthropos) to the primitive man (*Homo primogenius*). The evolution of groups, highly developed mentally, takes time for its completion.

It has not been fully established as to where and in what territory the development, which resulted in the genuine dog, had its origin. According to Professor von Bunde, the composition of the milk of the mother — or the prevailing temperature in the climate at the time — is said to serve as a vital factor in the determination of the locality of the original home of the dog. In his theory, he argues that in warm districts, animal life depends on the degree of sugar in the milk of the mother; while on the other hand, in cold districts, animal life is dependent on the degree of fat contained in the milk as an indispensable means of maintaining life in the young. This is explained by the fact that the milk of the bitch, while containing a high percentage of fat (9.2% as compared with 3.7% in cow's milk and 2.7%—3.6% in human milk), possesses, on the contrary, a small proportion of sugar (only 3.1% as compared with 6.3% and 4.4—6.5% respectively). This points to an evolution in a cold northern climate. According to Jacobi, the grey-yellow flaked foundation colour, which is the peculiarity of all wild dogs, is an indication of an origin in a

similarly cold climate, and the varying colours of certain species, now extant, can be easily explained as due to their adaptation to certain distinct local conditions. The extraordinarily wide diffusion of the true dogs in the Eurasian (European-Asiatic) zoological region, which resulted from a migration, conclusively supports the supposition that the North was their area of evolution. In view of the fact that this region at one time was connected with N. America by an isthmus; it is readily understood how possible it would be for the dogs that stood lowest in the genealogical scale to push as far as South America — thus forming the vanguard of the pilgrim train. I have already mentioned that the origin of our present day dogs might be traced back to the order of carnivorous beasts (Creodontes). The oldest excavations, in which relics of prehistoric beasts have been discovered, have been made in the lowest strata of the earliest tertiary period; consequently the stock may have originated in the latest secondary epoch, i. e. the cretaceous period. According to Haekel, the primitive root of the genuine dog is supposed to be the sub-species of the Creodontes, i. e. the bridge or link-dogs, which are also found in the sub-eozoic strata. At the beginning of the oligozoic, i. e. the second geological epoch of the tertiary age, the sub-species of the viverridae (Cynodictides) was developed. This, too, according to Haekel, forms the original stock of all present day carnivorous animals; and in the process of its development, it came to be separated from the insectivorous animals, which also originated in the creodontes and even now to a great extent, bears some resemblance to them. The viverrine dogs were not yet toe-walkers, (digitigrades) but sole-walkers (plantigrades) with five toes; they combined in themselves the common racial characteristics of the dog, the bear, and the zibet-cat (viverridae), which at that time formed one family, but to-day are separate. Dogs and bears remain still combined, until the appearance of the intermediate grade in the amphicyon which also belongs to the oligozoic period; while in the course of subsequent evolution, the genuine cats, the hyenas and the martin branched off from the stock of the viverridae.

With the genus of that period, the inner toe of each foot began to atrophy as the result of the conditions of the life of the light runner; thus renouncing the aboriginal inheritance of the vertebrates, i. e. this five-toed or five-fingered faculty. In the front paw, which serves not only for moving forward but also for digging, (to make their bed or to obtain food), and for which consequently a certain splayness was of great use, this atrophy is not yet complete. The inner toe, however, at the present time, no longer touches the ground, for it now reaches only up as far as the first half of the metatarsus. In the hind leg, however, the fifth, i. e. the inner toe which would hinder them in their stride, has completely atrophied and has disappeared, at all events in the wild-dog. In the case of the domestic dog, on the contrary, this toe reappears in a new guise in the form of a "dew claw", or "wolf's claw", in some breeds with varying frequency, but with others quite regularly. It even appears sometimes

as a deformity, a double claw-or wolf's claws-, accompanied by a loosening of the joints in the case of domesticated animals. These claws are called "wolf's claws" although the wolf does not possess them. Hauck has, however, occasionally observed them in different kinds of jackals. This claw, when it appears, is now, mostly, but a loose excrescence with a nail, and only in rare instances is it joined to the bones of the tarsus or metatarsus by cartilaginous tissue and sinews as a relic of the atrophied fifth bone of the splay of the foot.

After the final severance from the groups of bears, the dog family began to develop itself in the miocene age, which is the third epoch of the tertiary period, from the *Tennocyon*. (then in process of deve-

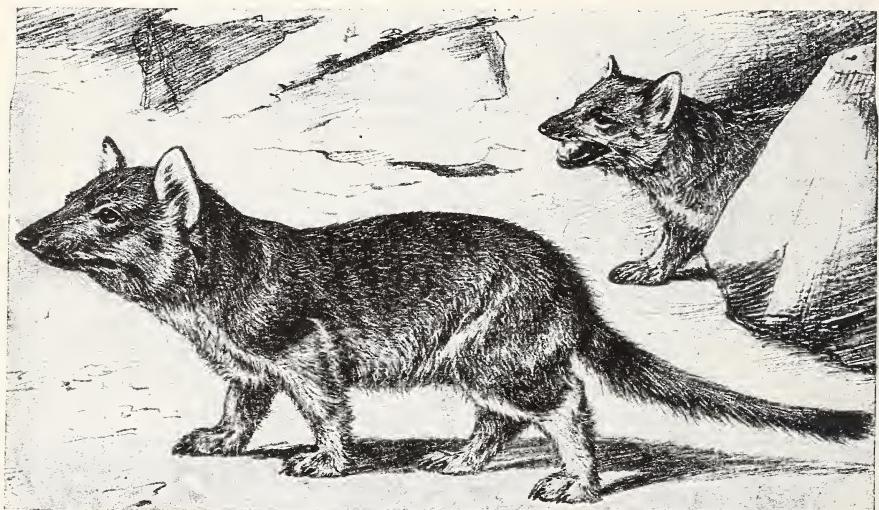


Fig. 1. *Icticyon (Speothos) Riveti*, a recently discovered wild dog from Ecuador, (South America).

lopment), by means of intense emphasis on certain points in the plio-cene, which is the fourth and last epoch of the tertiary period, till it produced the genus *canis*, the genuine dog, including the domestic dog, the jackal and the South American Thous species; (which latter we already reckon as the lowest in the genealogical scale in the dog group and which formed the head of the pilgrim train which emerged from the North). There are also the *Cyon* species, the Alpine wolf or dog, and the similar original South Asiatic and Siberian Species, the *Lyacon* (hyena dog) and the species of the *Lacylopex* from South America, which latter appear as an intermediate group of the family of foxes (*vulpes*) and *Fenecus*. At an early stage in the history of the genus, the families of the marten dog and the *Otocyon* (with spoon-shaped ears) and the *Icticyon*, or forest dogs, branched off from the parent stock. The genuine dogs then take the lead, and from them the

domestic dog was tamed and developed by special breeding. The highest developed kind, the wolf (*canis lupus*), with his many sub-species, was already existing in large numbers before the beginning of the glacial period in the super pliocene, that is to say about the close of the tertiary period, or, in round numbers, about two million years ago. There were also found quite a number of wolf-like wild dogs of smaller proportions.

A student of the principles of evolution will know that the members of the species above mentioned, (as branching off at a very early period and who therefore have not yet attained the summit of development), will best furnish us with a true picture of the ancestors of our true dogs at the middle tertiary epoch. This is confirmed by a wild dog, discovered by Trouessart, as late as the beginning of this century, in the Andes near Quito in South America, that veritable retreat of living animals, elsewhere belonging to the past. This was the Icticyon Rivetti belonging to that very inferior subspecies the Icticyon, of which up to the present, one kind only, the Brazilian forest dog (*Icticyon venaticus*), and of him but a few specimens, have become known. Externally, this newly discovered wild dog shows only a few indications of the characteristics of the genuine dog. The long-barreled bloated body, the disproportionately long, flat and blunt tail which does not taper and which appears to be cut off short — it cannot be described as a brush — would lead us to conclude from the picture (see No. 1) a marten-like carnivorous animal rather than a dog-like animal. The length of the male, which however was not full-grown, is given as measuring 18" from the tip of its nose to the end of its tail, which, by itself, accounts for $7\frac{1}{4}$ " of the total length.

The decisive indication is found in the general arrangement of the teeth. In this respect, this newly discovered specimen is absolutely similar to the dog although the last two molars are missing; but this can be accounted for by the shrinking of his muzzle. A similar bite is found as well in the Lyacon, who also branched off quite early from the radical stock of dogs. Of the milk teeth of the Icticyon, we unfortunately know nothing. In the case of the Autocyon living in South Africa, on the other hand, (whom we mentioned before as also belonging to the family, which branched off from the chief stock at a very early date, and who led the migration when the dogs spread from the North towards Africa), the milk-teeth show a great similarity to those in the jaw of the insectivorous animals. In the instance of the milk-teeth, however, (according to the fundamental law of Evolution that the history of the embryo or the development of the individual being is an abridged reproduction of the history of the genus, which indeed Rütimeyer confirms in this case), the teeth of the long disappeared ancestors reappear and form a different and more complete bite than the ordinary second teeth, thus allowing us to draw conclusions as to their bite.

The colouring of the newly-discovered kind is described as being a light grey, mottled with black. The hair is unique, very

thick, fine and woolly, similar to that of the marsupalia and of the lemurs, who, as is well known, are both representatives of the ancient primitive types. At this juncture I wish to remind the reader in addition, that the down of our puppies, the milk hair, corresponds to what has just been described, but with this difference, that, as growth continues, the longer hair which will emerge as an outer covering, pushes gradually through this down. Early growths, however, according to Haeckel's previously mentioned fundamental law, (in certain respects with similar substances), serve to indicate grades that have long since been passed in the progress of the evolution of the stock. It would be an event of considerable importance if a report that appeared in the press during the summer of 1908 were to be found true. The English explorer Tanning was reported to have discovered a new kind of wild dog in Western Australia which was said to belong not to the marsupalia, but to have the dimensions of the rat and to feed principally on lizards and bugs. Perhaps this discovery might turn out to be closely related to that group of primitive mammals found in the strata of Ternay which doubtless were spread equally over the face of the whole earth. We should thus have still one more living representative of what elsewhere is but a fossil, similar to that well-known trio, the hedgehog, the mole and the shrew, those remnants of primitive forms, retaining the closest similarity to them right up to the present time.

Thus far we have followed the evolution of the wild dog stock from its earliest beginnings; we will now direct our attention to the origin of our domestic dogs, who of course, like all domesticated animals, are to be traced back to their wild prototypes. However of this, more anon. Let us proceed to consider somewhat, how we can imagine what the process of becoming accustomed, and of being domesticated means to wild animals, especially to our dogs.

We spoke above of these far remote times, about the close of the tertiary period when the first true dogs and the first hints of "man" appeared. As yet, however, they had not fully earned the designation "MAN"; it required the misery of the commencing glacial period (called the quartiary, pleistozoic or diluvium) to give the final successful impetus to crown their former struggle to attain to the full "Man" stage. Instead of speaking of one glacial period, it would be more correct to speak of four or five, with their respective number of intermediary epochs, each having a higher average temperature, which consequently caused a sliding back of the glaciers expanding far and wide over the mountain ranges and the adjacent plains. To-day we are living in an alluvial or post-glacial period succeeding the last glacial age, the date of which has been fixed at about 20—25,000 years ago.

The proanthropos hordes that were contemporaneous with the glacial period in Central Europe lived together in small communities, finding a common bond in the hardship entailed by hunger. They were still without fire, but had some primitive attempts at weapons and implements, partly in the form of wooden clubs and

partly of stones shaped for that purpose. For them there was only one vital question, that of self-preservation, which meant the preservation of the species. Their immediate environment and their more remote surroundings were of importance for them only in so far as they had any connection with the solution of this all-pressing problem. The anxiety entailed by the necessity of finding food and shelter during the glacial period brought them further on, higher in the scale of evolution, and forced the developing species to set about a stricter use of their mental powers: their speech was evolved at that time; their weapons and tools became more perfect. Still, the animal world by which they were surrounded was considered from the point of view of its possibilities of affording either prey for food or enemies that might overwhelm. The well-known excavation ground of Predmost in Moravia gives us a picture of the "Loess man" who lived during the last inter-glacial epoch and of the animals he used for food. This "Loess man" belonged to a race which had already risen above the "Neandertal man" (*homo primogenius*) and was designated as primitive Mediterranean man (*Homo Mediterraneanus* var. *fossilis*). The "Loess" hunter must, many a time and oft, have taken shelter beneath the frowning crags of chalk formation near Predmost, for in the ash-heaps of their fire-places, there have been found bones and flint tools in enormous quantities. The animal relics found there are mainly the tusks and the molar teeth as well as the bones of mammoths; but in addition, bones of wolves were found in large numbers. This can probably be accounted for by the fact that the mammoth was the most favoured, because the most profitable, hunting quarry, and the wolves which gathered near the welcome slaughtering place to sneak a living from the leavings, (that they did so is proved by the bones which they have gnawed and left), were killed and eaten by the infuriated hunters as a punishment for this illicit competition.

This resorting of the wild dog to the cahnes and lairs of the primitive hunter, which must have been preceded by stealthy tracking, gives us an idea of the first meeting between man and dog. Even to-day the smaller kinds of wild dogs love to follow in the tracks of such large predators as the lion and the tiger, or even the hunter, in order to feed as parasites on the scraps and leavings. This they still do, when hunger compels them to prowl round the occasional resting places and human settlements in the hope that cahnce will favour them with a "bonne bouche", and with the confidence at any rate that they will surely find some leavings or other to satisfy the cravings of their rumbling stomachs. We often hear of the American coyote, the old world jackal, coming in the night watches to farms and villages to scratch amongst the dung- and refuse heaps; and our own fox finds his way to those places in winter at slaughtering time. In Southern countries to-day, after the vultures, Pariah dogs remain the most reliable and often the only street scavengers and destroyers of filth. But to resume: granted that little enough was left from the board of original man but entrails with gnawed and

splintered bones, this, along with vomitings, will have sufficed to inaugurate a utilitarian cooperation, though at first it was only one-sided. From the kitchen middens and refuse heaps of prehistoric man, (which we will describe later on), the softer bones are regularly missing: and doubtless wild dogs, probably even half-domesticated dogs slunk off with them and ate them.

In the opinion of Dr. Hahn, the lure of the relinquished but still warm fire-places may have also contributed to accustom the wild dog to such resting places. The inclination of our domestic dogs to lie near the fire is well known and such mentally highly developed animals, as for instance the Simiae of the African virgin forest, have been credited with a similar penchant.

Yet another circumstance, hitherto neglected in this regard, must be considered with reference to the refuse heap and the resting place. The principal organ of the dog is the nose, he "thinks through his nose", as we through our eyes. At those places the human scent was very sharp, especially when the animal took the bones gnawed by man or even fed on the human excreta and vomit. After a successful hunt, primitive man, just like the savages of our own days, undoubtedly gave way to uncontrolled debauchery and had to pay the penalty. When therefore the dog came into such close contact with the human race, he "smelled himself", so to speak, (which is the current technical term for the habituating of a strange dog), into intimacy with him. This he succeeded in doing to such a degree that he lost all fear and repugnance with regard to the human scent and did not start back when warned of its presence, as some other animals, who are guided by their nose. The dog-lover who now wishes to win the affection of a dog knows that he has attained his end as soon as he succeeds in impermeating the animal with a sense of his personality, making himself attractive and en rapport with the dog by means his scent. Even with ourselves, noseless men that we are, impressions by means of smell play perhaps a subconscious, but by no means unimportant rôle, especially in sexual life. Now dogs are animals, whose sexual instinct is easily aroused, and we may presume that it must be added to what we said above, that the scent of human sex was not disagreeable to the wild dog because it appeared to him as congenial to that of his own kind. No male dog, not even a wild dog, still less a bitch in heat will ever pass a canine "rendez-vous" without leaving his card, consisting of a few drops to show that he has been there. Strange to say, dogs not only return the compliment in this way at the places where their own kind have "made a call", but also where man has done the same. Anyone can easily observe, often enough in the street, how that man's sexual scent seems to have an attraction for the dog. I consider that this "smelling himself into intimacy" by means of the human scent which has been accomplished by the wild dog, is an essential incident in his "self-taming", as this process of habituating and domesticating has been aptly described. In the same way, the growth in this intimacy may have greatly assisted in raising the dog to the

highest pinnacle among our domesticated animals. Is it not remarkable that all animals employed in man's domestic economy, except poultry, are animals with a strongly developed power of scent; nose animals, as e. g., the dog, the horse, the donkey, the bullock, the buffaloe, the reindeer, the goat, the sheep and the pig, even the rabbit; and in southern climates, the camel and the llama, and also the elephant to a certain extent; and that, moreover, in their wild life, they are all gregarious animals and therefore all accustomed to community life? The only domesticated animal which is neither a "nose animal" nor a gregarious animal, the cat, has never yet, in spite of an intimate connection with the human hearth and home dating back many thousands of years ago (which might have procured for it the same position as the dog), become a fully-developed domestic animal.

Such a self-taming of the wild species as I have tried to argue out for the dog, has no doubt preceded the actual process by which all our domestic animals, mentioned above, were domesticated. To-day we establish artificial oyster-beds consisting of nothing else but hurdling or poles rammed into the sand to increase for the oyster the possibility of settling. In the same way, primitive man, who, in spite of his limitations, was still very familiar with the needs of the surrounding animal life, may have proceeded in an endeavour to establish for himself in a likely neighbourhood a provision of living flesh. The craving of all herbivorous animals for salt is a well-known fact. Wild animals wander over wide expanses to find their way to the natural salt-deposits, or "salt-licks". Was it not then the most natural thing for primitive man to make his camp in the neighbourhood of such "salt-licks", or — one step further —, to establish such "salt-licks" near settling places, favourably situated and protected, to draw the shy quarry (his "game") there?

The young of the slain mother caught alive when out hunting were taken into the camps where they grew up with the human kind and accustomed themselves to the hordes and to human scent. When they grew up, they may, especially at breeding times, have run back to liberty but would not always find that liberty to their taste and therefore would return more often than not with young; even if they had not actually been turned out for that very purpose. Later, they multiplied even in the "family circle" and thus produced young no longer genuinely wild; unless in times of dearth they had been previously killed. The secret reason for all this is also to be found in their becoming familiarly acquainted with human scent: which came in connection with cradle and child and won the game for the human partner; and thus the first step for taming and domestication was taken.

Just as the wild dog accustomed himself to man through his nose, with a view to alleviating the pangs of hunger, which naturally was not a question of to-day or to-morrow, but must be presumed as taking a very long time to settle; so on the other hand, primitive man grew accustomed to being followed by the wild dog during his

hunting and when settled in his encampments. Having, by the hard struggle for existence, acquired the habit of observing the surroundings very keenly, he certainly did not overlook the fact that the wild dogs, prowling round him or crouching near his camp fire, had a special instinct for the apprehension of approaching danger, seeing also that even when asleep, the dog was more perceptive than he, the future master of the universe. Their signs of warning were also useful to him; just as on the feeding grounds one kind of animal will listen to the warning signal of another. Granted even that the approach of the wild dog was at first a matter of indifference to primitive man; generally they were the smaller types that meant no danger for him, or, if often enough he drove away the eager troublesome pilferers, he would soon, after acknowledging the guardian qualities of his followers, have first suffered their presence without complaint and then have tried to get into even more intimate relationship by throwing them a morsel from his abundance.

Man is dependent on daylight; his principal organ, the eye, fails him in the dark. During his nightly repose he was menaced by all kinds of dangers, not only by the prowling beasts of prey, but also by the neighbouring hordes, covetous of his food, who would often make an attack on his well-stocked larder. Above all, however, he feared the ghosts, who ranging through the air at night worked, their wicked will. I say, "their wicked will", because to primitive man ghosts appeared altogether malignant, for his mind had not yet grasped the idea of a overruling benevolent Being. Timely warning was given of material dangers by the growl of the wild dog who, in virtue of his erect ears, possessed very acute hearing and who moreover was a very light sleeper; while his howling and barking, which happened occasionally even in his dreams, protected them against the supposed danger from the ghosts. Later on during the time of the lake-dwellers, perforated dog-teeth (the fangs) were worn as a charm against ghosts, who were supposed to bring ills and woes of all kinds.

Thus here too, as in many other instances in animal life, a utilitarian cooperation, founded on a mutual exchange of benefits was inaugurated. We find species, racially different, forming mutual complements, assisting one another by the acuteness of their respective senses to their common advantage. We can observe, within the range of our own ken, the same ideas in operation as described in books on animal life in the tropics. In Autumn, for instance, when the starlings gather for their flight, they often alight among the flocks; fluttering about from sheep to sheep, heedless of shepherd or dog, to pick out and feed upon the various parasites that infest their thick wool.

From what was at first but a tacit consent to tolerate the dog at the camp, there gradually grew up the avowed intention to adopt him. The qualities of the dog as a guardian, already realised and appreciated, were to be made serviceable to the horde, with the

possible afterthought that in time of need, such a good companion might prove an equally acceptable joint.

No doubt the dog in his new capacity prudently kept out of the way of the rough and remorseless men, becoming the pet of the children, with whom he romped and played as with his own kind, while the women, who must remain in the camp, took care of him. From being their charge, for at first only puppies were adopted, he gradually became their guardian and protector, when the men went on their expeditions. Undoubtedly the primitive hunter soon became aware of the fact that the wild dog possessed the gift which he, on account of his uprightness of body lacked, i. e. the power to pick up the scent of the game and follow the trail much more swiftly than he himself could follow the spoor with his eyes. Very soon he will also have recognised and imitated the swift wild dog in his manner of hunting, which was to run to a standstill his prey, in packs, and then to tear it in pieces. Naturally a long time elapsed before the half-tamed animal was used for hunting purposes. Originally, the newly domesticated dog served as the warden and protector of those left in the camp such as the women, the children, the sick, and the weak, and also of the live possessions i. e. the other domestic animals that had only been tamed much later. Then and then only did he become the hunting companion of man.

It is well known that the habituating and taming of wild dogs, even of such that have been caught when full-grown, does not offer any insuperable difficulties. We need not go to a savage country to observe this, for are there not among us nature lovers who are keeping fully tamed wild dogs, especially wolves that have even accustomised themselves to traffic in large cities? These owners declare that this process of habituating presented no serious difficulty. Such tamed wild dogs will learn to bark, will express their feelings towards their master and other companions just as the house dogs, and are even said to copy their distinctive vices especially as regards to the tail.

The fact that domestic dogs bark while the wild dog is believed not to bark, is often given as a reason against the originating of our house dogs from the wild species. This is a contention that will not bear examination. In the first place, there are families of domesticated dogs, in high Northern countries as well as in the South, that seldom bark, if ever. Furthermore, we have already asserted and proved that wild dogs, kept like the domestic kind, eventually acquire the habit of barking; and secondly, it must be admitted that unfortunately we know so little of the free life of many wild animals, who are the least remote from us, that the assertion that wild dogs never bark is just as likely to be true as the statement that the hare sleeps with its eyes open, and that the stag does not "take soil" (drink) etc. It has been proved, for instance, in the last few years again and again that the fox, in addition to snarling, does occasionally and undoubtedly utter some barking noises. There are no other wild dogs in our hunting fields, however, which we may observe, and

such facts that the countryman has long since known and recognised as obvious, do not always come to the ears of our scientific theorists and armchair describers of animal life.

During the War I had the opportunity to observe for some time a three months old wolf-pup at Nish in Serbia; he belonged to an officer of the Army Railway Department and had been taken from the nest, when about ten days old, with three of his sisters, by soldiers who were searching for fuel, after they had killed the mother. The wolf cub, who sucked up his milk with the help of the finger of the officer's orderly, thrived, while the rest of the litter had died under the treatment; but in comparison with sheep dog puppies of the same age, he was a poor little devil, which no doubt may be accounted for by the way in which he had to be brought up, and which was so unsuitable to his particular species. This is very instructive, for it shows us that when wild young, taken from their nests, or those

born from tamed fullgrown animals were domesticated, their physical development must have been stunted as compared with their wild relatives; so that it is not beyond the bounds of reason that a small weak house dog may have descended from a larger and more powerful wolf species. This Nish wolf pup had forepaws, extraordinarily powerful, from the root down, and had uncommonly good teeth. He was kept on a long chain in the yard where he used to play a great deal with an old sheep dog. When not so engaged, he kept a sharp eye on the poultry. As soon as one of them, chickens or ducks, in their hopelessly stupid daring came too near his dish or his kennel, there was a



Fig. 2. Wolf cub from Serbia, three months old; from a photograph by the Author.

jump, and — at least some feathers. It was therefore impossible to allow him to run about the yard; but in a room he was extremely well-behaved without showing any destructive or gnawing propensities, as is the case with puppies of his age. He was not as obedient as he might have been, which is not to be wondered at considering his age, but it was astounding how rapidly he had become "clean". He played with his master, or with the orderly just like a puppy, he was always hungry and they fed him with all kinds of scraps and leavings as a dog would be fed at a time when food was scarce, which however does not mean that circumstances were so very bad in rich Serbia. He ate everything, even dry military bread, the latter however with no great gusto; but as soon as ever it was covered with jam — that inevitable war jam — he gobbled it. Primitive man in those far off days. (supposed to date back 12,000 years ago), had good reason for first introducing the dog into

his household, for he had come to realise that its qualities as a watch dog would be very useful to the hordes. There was also this reason which contributed to effect the adoption: the young of the carnivorous animals are confined to the nest in a helpless state for a comparatively long time; while the offspring of the grass-eaters can soon swiftly follow their parents. Thus primitive man would often enough, by chance or design, have been led to the "child bed" of a wild bitch. To rob the weak of her young involved him in no danger; did she, however, defend herself, she was slain out of hand and the litter was taken to the camp, at first merely as a toy for the children. How then were the pups, who probably would still need milk, to be reared, especially as their successful upbringing would be of importance to the horde? There were no cows, goats, or other milk-giving animals as yet; what then was more obvious than to place the pilfered pups to the breast of a woman? This process of taming by scent, already begun, would, by this means, become intensified.

This placing of the young animals to the breast of the woman is still practised frequently to-day among savages, for various reasons. According to Plosz this was done in Germany in earlier times, and is actually being done to-day in Persia for "hygienic" reasons. Among the people of Kamtskatcha this is done with the idea of fattening for themselves a joint of succulent puppy, but in the South sea Islands and in Australia this is done from love of the dog. We shall hear more about this later on. Among the South American Indians, this practice was prevalent in order to keep the women a long time in milk for the sake of their children and grandchildren. There, it is the custom to nourish the children at the breast for a very long time, generally up to the fifth or sixth year, and one can often see quite well-grown little blighters with a cigar alight in one hand, and with the other helping themselves to the obliging breast of one of the belles of the tribe. For, as the sucking of the youngest child is the duty of the mother, the larger children must naturally be fed in the same way by their grandmothers and aunts. Between whiles, all kinds of animal young are placed to their breasts to "keep them in form", which reason may also have had some weight with primitive man. If we wish to obtain a correct picture of the services which the domesticated wild dog probably rendered to man, it is certainly best to read the descriptions of the life of the present day savage of low development. It is well known that the people in the extreme North of Asia would hardly be able to exist without their half-wild dogs, which serve them as guardians to round up their reindeer herds. They are indispensable to them on their hunting expeditions, and equally so as draught dogs, and in hard times serve as a last resource to feed their masters and their own kind.

In connection with the dog living with the Battas, (a tribe in the interior of Sumatra, existing under identical conditions as the lake-dwellers of the later stone-age of Europe, whom we shall mention later on), we give the substantial meaning of the report of Mr. Sibir as follows: — The Batta Spitz receives very little kindness from his

master, but he alone, among the domesticated animals has the right to live in the settlement and to sleep in the rooms of the pile-huts. He is an excellent watch dog and invaluable to his owner on account of the many attacks provoked by the feuds which the Battas have among themselves. Slavery or imprisonment is the penalty for those who allow themselves to be surprised, while the prospect of fattening for some festal meal. (except in the case of the women), is almost a practical certainty. Outside their huts, the Batta spitz accompanies the men on their hunting, at first, alone as a pointer to indicate the quarry (the stag), then in packs to drive the prey into the prepared traps or nets. Otherwise, the dog belongs entirely to the woman, accompanying her as guardian and protector when at work outside the house, or when bathing. On the latter occasion, each dog watches the clothes of his mistress, which are placed in rows on the river bank. He is very useful in the poultry yard, for he keeps away the vermin from the chicken runs which are situated some distance from the house. His resources are very scanty: refuse and leavings from the meals, (at the side of the rice mortars one might see him fighting with the chickens for the occasional grains which were thrown out), bones thrown to him and even excrements; he will also catch for himself mice, insects and snails. If he grows large and fat on this luxurious diet, he will eventually grace his master's board as a much appreciated dish.

Speaking of the dogs of the people of Tierra del Fuego, the most Southern part of South America, Dr. Benignus wrote to me "The dogs here exhibit wonderful powers. On land they trace the spoor of the game, on the cliffs and in the woods they surprise the birds in their nests, especially at night, bringing their prey silently to their masters. From the boat, they will successfully dive into the water for fish, and for the sea-otter with his valuable pelt. It is common talk, but I have never seen it myself, that the dogs will swim out to sea and drive the fish in large shoals on to the beach so that the master may have a better catch". This will throw light on Darwin's observation that in times of scarcity these people will sooner kill and eat their old women-folk than their dogs.

A very instructive description of the Australian dingo, (whom we shall frequently encounter in the following pages), is given by Haacke in his "*Tierleben der Erde*" (animal life on the world). I quote it because it shows us the method of taming and employing wild dogs, used by a race which has remained undeveloped right up to the present time. This race, according to Wilson, just like the above-mentioned Fuegians, has risen physically and mentally very little above the degree of development to which in our own zone, prehistoric man of the glacial period had attained. He says "On the Herbert river, in North Australia, it is asserted that seldom more than two or three dingoes are found in company with the tribe, which are usually pure and not crossings between dingoes and domesticated dogs, and that the natives take better care of the young dingoes found in the tree hollows than of their own children. The dingo is

considered to be an important member of the family, sleeping in the hut of the native, and abundantly fed on meat, and fruit as well. It is never beaten, but kept in order by threats and it is often fondled like a child by his master who lavishes his kisses on its mouth and crowns this tender relationship by picking out his fleas — and eating them. This kind indulgent treatment, however, does not prevent the dingo from occasionally making a bolt of it. This happens often during pairing time, and a dingo who runs away at that period will never return. In spite of this imperfect taming, the dingo, (who only obeys his own

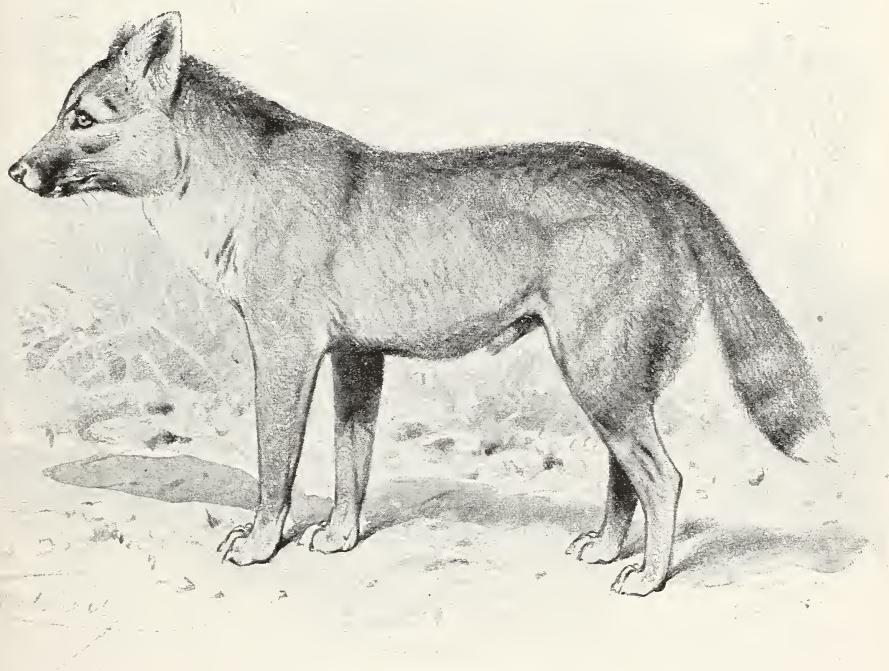


Fig. 3. The Dingo (*Canis Dingo* Gould), from Haacke-Kuhnerts „Tierleben der Erde“

master), is very useful to the natives. This silent dog, who surpasses other dogs in his presence of mind when hunting, has a very acute sense of smell, can track game of all kinds, follows it with the swiftness of the wind, and often catches it on the run. It happens at times, however, that he will refuse to accompany his master any further; then the latter is forced to carry him on his shoulder, which is very much to the taste of the dingo. The dingo who, like the wolf, easily imitates the barking of the domesticated dogs, is, when at liberty, a shy retiring animal, heard very seldom during the day and more often than not, stalking his prey at night; rarely in larger companies

than four or five of his kind, but on very rare occasions prowling about in packs of about 80—100. Generally the mother lives alone with her litter, and such families confine themselves to a strictly limited area from which they never stray and on which they allow no members of other dingo families to encroach."

It will be hardly possible to say with greater precision in what prehistoric epoch of the human race the domestication of the dog began, if for no other reason than that there are no clearly-defined lines of demarcation between the time when he was an uninvited guest, the tolerated scavenger, and the fully domesticated dog. Moreover, for the premisses for all these conclusions, we are unfortunately restricted to the very scanty excavations belonging to more remote times. One thing, however, may be said with certainty, the dog is the first and oldest domestic animal of the human race.

In the strata of the excavations belonging to the glacial period, no relics have been found which would indicate the presence of a domesticated dog. Such indications are to hand only in later discoveries belonging to the present post-glacial period, while proofs for the keeping of other domestic animals belong to a considerably later epoch. Furthermore, these excavations show that the established similarity in the skeletons, (especially as regards skull and teeth), between the same domestic animals and the species living at liberty is so great that it can only be accounted for by the very closest relationship, i. e., by a common origin for the wild and the domesticated kind, which latter is much younger in Natural History than the older and wild species.

In a previous paragraph we have seen that even during the last interglacial period with its abundance of game, the hordes of paleolithic man, roving near Predmost, were prejudiced against the wild dogs that approached their lairs. This relation probably did not change materially during the subsequent very lean glacial period. The time, when the wild dogs were tolerated near the refuse heaps of the camp, can, therefore, at the earliest be placed during the period when the last glacial period began to recede, and when the cares and anxieties for the daily bread became somewhat less acute and the human beings, living at the time, had already reached a comparatively high stage of development.

Just as the history of the development of the earth has been divided into epochs, (primary, tertiary and lastly quartiary), and as these again are subdivided in accordance with the leading geological strata, (e. g. the epoch of carboniferous formation, the cretaceous, eo-, oligo-, meio-, and the pliocene), so the most primitive history of humanity is divided into various epochs, named after the principal raw materials that were used for the making of weapons and tools that have been discovered. Here we have, as the oldest epoch, the prelithic age, then the genuine stone age of very long duration, which again is subdivided into the paleolithic, mesolithic, and neolithic, and finally the bronze and iron ages. None of these are strictly separated but merge the one into the other; partly even co-existing;

though not in the same regions. We have an illustration of this today in countries where savagery are still existing in a stone age of their own, exactly as in prehistoric times, while at the same time the goods and tools, as well as the arms of our own advanced civilisation, are trafficked with them. The above mentioned main prehistoric epochs are divided again into numerous sub-sections for the sake of clearness. These subsections are generally named after the principal places of excavation that imprint their seal on that particular evolutionary epoch and represent an advance on the preceding stage e. g. the Mousterien, the Magdalenien, the Campignien, and the Hallstatt epochs. The very long paleolithic epoch merges towards the end of the last glacial period into the comparatively short mesolithic epoch, and is followed at the beginning of its post-glacial period by the neolithic epoch. During the latter period, atmospheric conditions, generally corresponding to those of our own time, began to prevail, but on account of the extensive thick forests and marshes which covered the greater part of Europe, the atmosphere possessed a much higher degree of humidity. Men, although still cave-dwellers, first began to settle on the land, while to this epoch belong the first of the lake pile-dwellings. Arms and tools show a considerable advance as compared with the earlier breeding of domestic animals.

We might therefore place the beginning of the taming of the dog about the end of the mesolithic, but more probably, however, about the beginning of the neolithic period. At that time a human stock, was already living on the greater part of our Continent, especially in the North, (but of course, not as yet in dense populations) of symmetrical high stature, with a well developed brain, which had evolved itself from the already well-bred "Cro-Magnon Race" and is described as "Homo Priscus", (or *Homo Europaeus* var. *fossilis*). An examination of the kitchen middens (*Kjökkensmöddinger*) which were piled up in the neighbourhood of their dwellings, gave us the first knowledge of some tribes who were living on the South West coast of the Baltic in pits which were roofed over. These people living there are described as "mussel eaters". After the refuse found on most of these prehistoric heaps, and, according to the tools and weapons discovered, they belonged to the Campignien epoch. They did not yet cultivate the ground with hoes. We find also in these refuse heaps the first traces of one of the smaller types of wild dogs that had come into more intimate contact with man. These were probably half-tamed already; in any case they were appreciated as reliable watch dogs, perhaps even as ghost-layers, and were tolerated as playmates and as guardians for the women and children, serving in times of need as a good meal, and prized, no doubt, for their skins as well. According to the discovered relics, they were considerably smaller in size than the wolf, deteriorating physically as the result of their domestication, and still more as a natural consequence of their mode of life (see above); for the "bread of serfdom" which they had chosen for themselves might be secure, but it was passing scanty. The exact

period for this first established domestication of the dog can be placed as far back as 12,000 years at least.

In a place of excavation belonging as well to the Campignien epoch, (i. e. the close of the mesolithic period), on the estate of Bologoje of Prince Poutjatin near Moscow in Russia, a discovery was made at the beginning of this very century, which is of the greatest importance in the history of the origin of our domestic dogs, namely, the *Canis Poutiatini* of whom we shall speak later in more detail. In his case too, we have been unable to fully prove whether he is a half tamed wild dog (*canis ferus*), or a fully domesticated house dog (*canis familiaris*). On the other hand, the dog found in the oldest pile-dwellings in Switzerland, belonging to the beginning of the neolithic period, the moorland dog, or lake-dweller's spitz (*canis familiaris palustris Rütimeyer*) is already a genuine domestic dog, the oldest discoveries about which must be dated back at last 10,000 years.

Besides this moorland dog just mentioned, some other house dog stocks or original races made their appearance, but it will be necessary now at first to approach the question of origin in its more restricted bearing. In a general way, I follow, in this, the investigations and records of Professor Studer, whom I wish to take this opportunity of once more thanking most heartily for his very kind assistance in my former labours on this question. Before we enter into the real question of origin, let me say a few words with regard to the expression "Dog Race" which I used just now, and which will appear frequently. The Natural History of animals and plants (Zoology and Botany) divides its phenomena, in imitation of Linn's example, firstly into main divisions, called, Classes, these Classes again into Orders, and the Orders into Families. Every family has, again, a greater or lesser number of "Kinds", which in course of time have developed side by side from the original form, or one out of the other. In the history of domestic animals, the idea of kind is replaced by the word "Race", whereby it is open to uncertainty whether these domestic animal races have been evolved from one or several wild kinds, and then developed by artificial selection for the purpose of breeding. Speaking of domestic animals employed by man, we understand by "Race" a group of animals artificially developed by him, (including of course their ancestors prior to their development), physically similar to one another as near as possible, and having been adapted to similar conditions of life and the fulfilment of a certain purpose from their inheritance, possessing certain qualities particularly useful to their masters and transmitting these qualities, if the breed is kept pure, unchanged and more fully developed to their descendants.

It goes without saying that the domestication of the dog was not attempted at one time only, nor at one place. We are, however, bound to accept the theory that, in consideration of the wide diffusion of the wolf, who must take first rank as the ancestor of our race and of his many sub-species, as well as that of his near relatives, the wild dogs, (whose diffusion has been proved by excavations in countries most remote from each other), or their very near relatives have been

chosen for this process of taming and domestication. Studer excludes absolutely from the wild dogs that might possibly have contributed to producing the domestic dog, the families of the Alpine dogs, the hyena dog, and the fox (*Cyon*, *Lycaon*, and *vulpes*). He has discovered distinctive features of the skull quite peculiar to these families which distinguish them in such a way from the discovered relics of domestic dogs, and also from our present day domestic dogs that their collaboration is entirely out of the question. Studer also wishes to exclude the subspecies of jackals from the family of "Canis", the genuine dogs. He is of the opinion that they have not participated in this production, but in this he has been contradicted at least so far as the already mentioned "moorland dog" is concerned. The Thous types who migrated to South America, those lowest members of the *Canis* family are to be left out of this question on account of their area of distribution."

There remains now only the wolf (*canis lupus*) with his numerous local subspecies to be taken into consideration. We have already demonstrated the liability of the wolf to variation, not only as regards skull formation, but in bodily size. — even within the space of his comparatively confined home. — which would be sufficient to explain the individual diversities in type which are to be met with in our own domestic dogs.

We shall omit the question of the indigenous domestic dogs of America, which perhaps, (resembling the type soon to be described with the dingo), wandered once upon a time over the Western isthmus into the new continent in the wake of the advancing tribes; or yet, which seems more probable, came there as wild dogs in their train, but most probably of all descended from the original grey wolf there, or from one of his relatives and became tame in a similar way as in the Old World. Thus Studer too, in considering the various kinds of dogs in the ancient world, presupposes several original types; but we must not forget that there is one kind which made its home in the Southern part of this territory, which has up to the present time preserved its breed in a fairly pure form in the dingo (*canis dingo* Gould) of Australia. This dingo, — which is no marsupial (pouch borne) but as a genuine dog is one of the few animals in its present locality which is suckled at the breast from birth. — is supposed, according to an accepted theory, to be a dog, once more wild, after having been previously tamed. He, however, emigrated in prehistoric times, with the first human beings that gave ground before the higher civilisation of the Northern peoples, into this remote continent, and in consequence of this situation in the evolution of his higher animal world — and also of that of his human beings — has remained completely degenerated. This, however, would indicate a very early taming by primitive man, which in no other parts has been proved, because traces of dingos are already found in the pleistozoic as well as in the pleo-zoic remains of the recent tertiary period, close to the strata of the quartiary period, along with traces of extinct marsupials. It appears to me to be more probable that the primitive



Fig. 4. Pariah dog from the neighbourhood of Cashmir, from Sven Hedin's "Across the Himalayas". (By kind permission of the Publishers, Brockhaus, Leipzig).



Fig. 5. Thibet dog, country stock, from Sven Hedin's "Across the Himalays". (By kind permission of the Publishers, Brockhaus, Leipzig).

form of the present-day Australian dingo had found its way, at the time of the passing of the tertiary period or even later, from its original place of occupation in South Asia over the isthmus of Indo-China to its present place of propagation; and that the taming of the wild dingo, of which we have just made previous mention, was first begun by the Aborigines of Australia in a former time, which is not so remote as has hitherto been imagined. From this dingo-like ancestor, Studer derives his descent of the present day domestic dogs of South Asia, with the exception of the races that have to be brought into the study of the descendants of the moorland dog, as for instance the Batta-Spitz, just previously described; above all, those which far and wide, even to Africa, are known as "pariah dogs", (described in India by this name, in Malaysia as "Glattaker", and in Mahomedan lands as "street dogs"), and also, further, the Thibetan dogs, as well as the greyhounds of the Southern Mediterranean that remain still to be described.

Several distinct types, however, are supposed to have taken part in the formation of the breed of the Northern domestic dogs of the old world, but they are comparatively few, and Studer only takes notice of five. Originally they must have all contributed to form the one genus, of which the various species of our dogs to-day exhibit such diverse and numerous features. All these last owe their origin partly, to an artificial selection in the course of centuries and cycles, which was directed and calculated by their masters, and partly, to casual and also involuntary crossing, at least in so far as they do not exhibit, as a retained, ennobled and perfected original type, as in the case of our own shepherd dogs the chief characteristics of the domestic dogs. When examining the various numbers of domestic dogs and some of their points of difference, as compared with the wolf, Studer comes to the conclusion that, even as in the South, the present-day dingo had once upon a time a "canis original" which he resembles, and was then tamed; so, in the Northern part of the Eurasian animal-world, during and after the glacial period, alongside the wolf, a similar wild-dog type, possessing the characteristics of the dingo, had existed, (about the size of the shepherd dog or the setter,) which is more nearly allied to the later domestic dog than the wolf and the jackal. Studer attributes to this wild dog the various, and unfortunately, very scanty wild-dog remains of the glacial period. This kind of wild-dog had a weaker jaw than the wolf, the flesh-tearing incisor teeth especially were not so well-developed. It was then tamed, and from them, by means of subsequent and oft-repeated crossing with wolf-blood, the race of larger domestic dogs was bred. Contemporaneous with this medium-sized kind of wild dog, lived a dwarfed form, about the size of a jackal, the canis ferus Mikii Wolfrich, from which the oldest type of domestic dog, the moorland dog was bred and tamed; while the domestication of the other larger kinds was probably taken in hand subsequently.

The discovery of the canis Poutianini, (which we have already mentioned), at length corroborated what formerly had been but an

hypothesis of Studer. Studer wrote to me with reference to this dog, which he had named after the discoverer as follows. — “The skull which has been received, resembles most of all that of the Australian dingo, but exhibits certain specific differences. This dog supplies the original type for shepherd, and hunting dogs.” In a treatise on the discovery, Studer established this conclusion as final and inevitable. As already stated, Studer supposes five distinct types for the present day Northern domestic dogs, the *canis familiaris palustris* Rütimeyer, (of which mention has been made), the moorland dog, or lake-dwelling Spitz, the C. F. Leineri Studer, the C. F. Inostranzewi Anutschin and the C. F. matris optimae Jeitteles (the dog of the Bronze Age). The last two are of special importance, the C. Inostranzewi as the original type of the herdsman’s dog; and the dog of the Bronze Age as the type of our “Schäferhund” (German shepherd dog). For the moorland dog, a small kind of wild

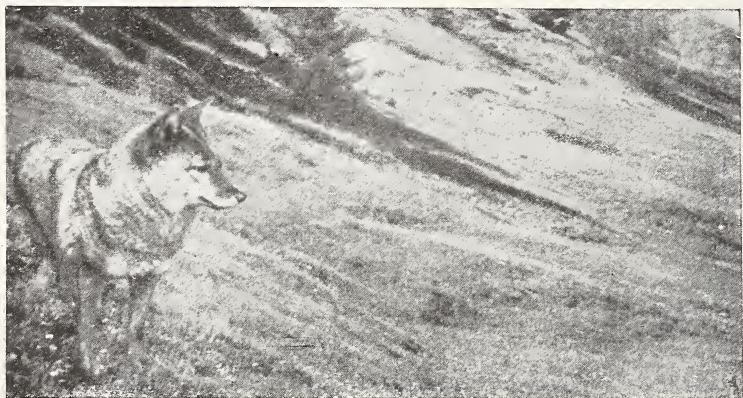


Fig. 6. European jackal, from Meerwarth-Soffel's “Lebensbilder aus der Tierwelt”, 6th vol., published by R. Voigtländer, Leipzig.

dog must be accepted as the father of the race. The dog of the Bronze Age and the ash-greyhound have departed from the recently mentioned C. Poutiatini, while the dog of the Bronze Age was retained especially, and further bred in his pure original form; but the ash-greyhound has altered its type through a special breeding controlled by man. The C. Inostranzewi also, stronger than the two former, has departed from the type of the C. Poutiatini, and through crossing with the wolf-strain has increased its strength; perhaps it may have been domesticated, however, directly from another and larger kind of wolf, and then the Poutiatini strain added for the first time. Similarly, the C. Leineri is of importance, but its origin and method of perpetuation have not been sufficiently made clear as yet.

In drawing up the accompanying “Genealogical Tree of the house dog of the North Eurasian country”, I have endeavoured to give a survey of the history of the original kinds of the domesticated dog, and their developments down to the most important of the present-



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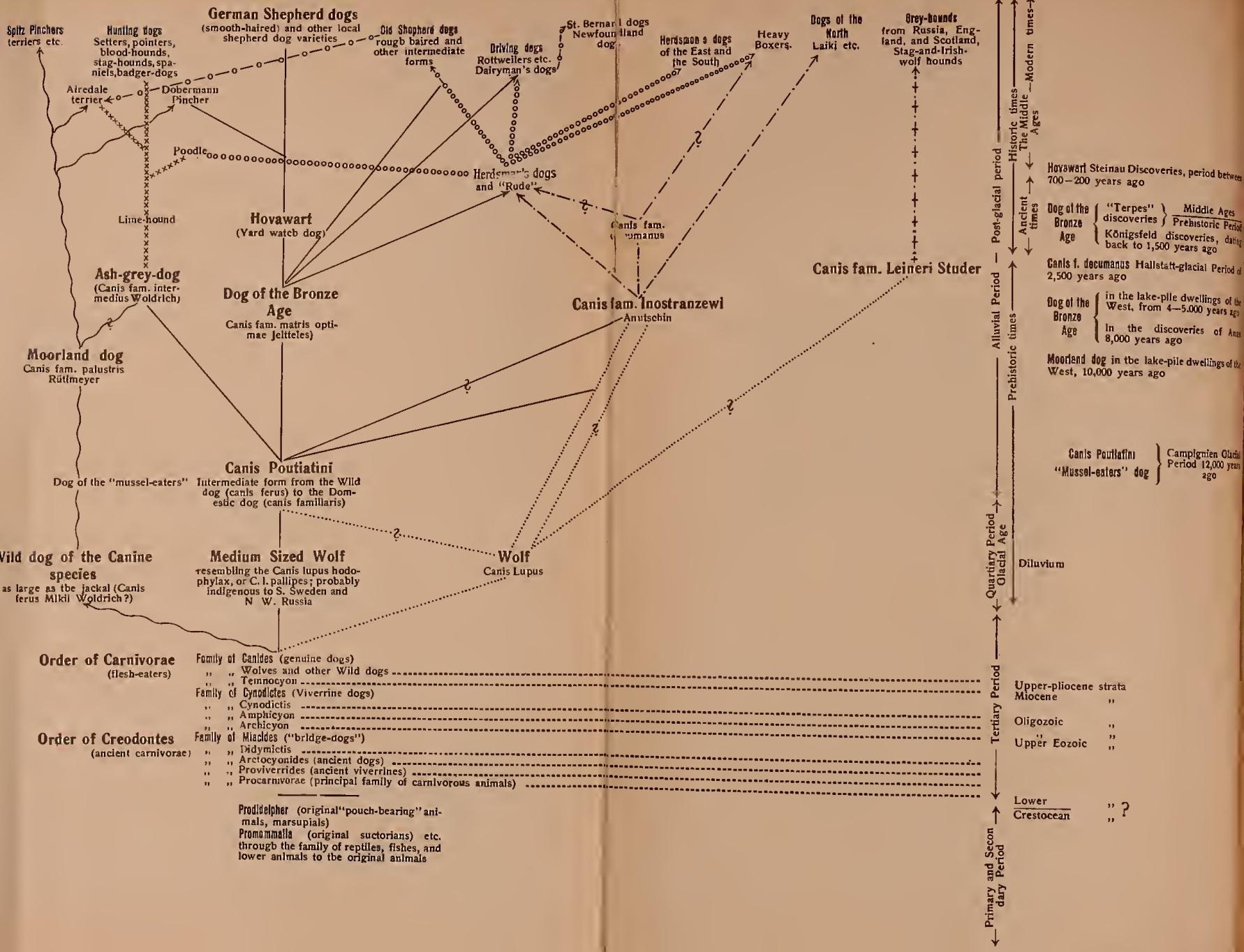
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day races. The different arrow lines on the page show the connection between the kinds that branch off from each other, or are connected by artificial breeding. The lines with "?" indicate that close relationship is possible or that new blood may have been infused. The lines with alternating signs indicate conclusively a mixing of strains; these are traced right up to the new stock they produce. I will add a few remarks in further explantation.

For the moorland dog, *Canis familiaris palustris* Rütimeyer, Studer chooses a small dwarf-like kind of wild dog as ancestor, namely, the *Canis ferus* Mikii Woldrich; but other savants consider him to be the offspring of a domesticated kind of jackal, which also belongs after all to the family of the "canis". At anyrate the moorland dog as we encounter him in his oldest known relics is a somewhat weak little fellow. His ancestor is rather to be reckoned as having been influenced by a long period of semi-starvation in the hard times of the glacial period, who, previous to this, had been a more powerful kind of wild dog. The different conditions of life which he would experience in the process of his domestication would help to aggrivate this deterioration; as we have been able to notice in the case of jackals, the coyote, and other small wild dogs in the Zoological Gardens; and in this connection I would recall my former description of the wolf cub from Nish. The moorland dog had spread over nearly the whole of Europe; his relics are to be found in all Southern districts bounded by an imaginary line drawn from Ireland to North Russia. He is found to-day practically unaltered in the Tangusian dog of Siberia and, (which is very instructive in tracing the expansion of primitive races), in the Southern Seas, in the Bismark Archipelago, and in the Batta Spitz, whom we have been at pains to describe in detail above. In the later discoveries of relics belonging to the lake-dwellers of the neolithic period, the moorland dog is found to have existed, preserving to a great extent the characteristics of his original form; but larger and more powerful specimens were also found which, judging by the skull, bear testimony to an artificial influence and alteration at work; and render possible a distinct cleavage in the race. From this moorland dog, together with the above mentioned dogs of the primitive people, and the chows in China, must be traced the Spitz and the pincher, and the English terrier among our present day dog races. He has also had a share in the smaller breeds of the high North such as the Lapland dog, the Iceland dog and the Finland bird dog (*Vogelhund*). The strain also of the dog of the Bronze Age, (later the shepherd dog), has certainly not remained unmixed with the strain of the moorland dog, just as this strain has doubtless purposely led to an amalgamation with the ash-grey dog or otherwise has come to run in his veins. As with the Batta Spitz, the moorland dog, as the first of the domesticated dogs, may also have been used by primitive man as a hunting dog. Then, quite naturally the idea may have occurred to man to breed his good qualitites in spite of his comparative physical weakness, into a more powerful race. At an Exhibition in Switzerland at the beginning of this century, I saw

Geneological Tree of the domestic dog of the North Eurasian Territory.



several good specimens of medium sized Spitzes, most of whom were white, who with their elongated and considerably lower body, differed greatly from the usual type of this breed. It is possible that in Swiss territory, which is one of the main districts where the old lake pile dwellings existed, the descendants of the old Spitz may have retained their form to a great extent unchanged.

In this study of the shepherd dog, it is hardly necessary to speak more fully of the *Canis fam. Leineri* Studer, about whose descent from the North or the South there is still no agreement and whom Studer reckons to be the ancestor of the hound-shaped dogs of England, including the deer and the wolf-hound, as well as of the Russian hounds (*Borzoi*). It may, however, be mentioned that, supposing that wolf's blood has been bred into him, the *Can. fam. Leineri* might be traced back to the *C. Poutiatini*, the forefather of our shepherd dogs; and Studer has found in the skull of the shepherd dog and of the wolf, features which were quite similar in the skull of the *C. Leineri*. We need not busy ourselves with the ash-grey hound, the *C. fam. intermedius Woldrich*. Studer sees in him, as well as in the dog of the Bronze Age, a direct descendant from the *Poutiatini* and the ancestor of our present day hunting dogs. His shape, where it has been retained with the least alteration, leads through the old German "Leithund" (lime hound) to our spaniels and the running dogs of Switzerland and France. The two remaining types, the dog of the Bronze Age, and the *Canis Inostranzewi* are of the greatest importance for those who are interested in the shepherd dog; the former as the ancestor of our shepherd dogs, and the latter as the ancestor of our herdsman's dogs, whose *Poutiatini* blood may be traced, through the old-German, the old-French, etc. and the shepherd dogs, back again to the pure shepherd dog stock.

Let us first consider the historically older *Canis fam. Inostranzewi* Anutschin, for whom a German and also an English name is wanting. The names of his discoverer and his first chronicler indicate Russia as the first place of excavation. The oldest demonstrable skull remains of this dog were found in that country on the shores of lake Ladoga together with relics of the moorland dog, and in prehistoric strata belonging to the time between the kitchen-middens and the first lake-pile dwellings; i. e. the beginning of the Neolithic Age. These strata are more recent than the place of excavation of the *C. Poutiatini*. Studer traces back the *C. Inostranzewi* also to the afore-mentioned dog, who had been infused with wolf-blood for the express purpose of breeding to make him more powerful and capable in attacking large beasts of prey. Other skulls of the *C. Inostranzewi* have been found in considerably more recent places of excavation in the Swiss lake pile-dwellings, near Font, for instance, on lake Neufchâtel, a lake pile-dwellers' settlement of a time about the end of the Neolithic period, and also in lake Biel near the mouth of the river Shüss. In accordance with other discoveries made near that place, Studer places the skull as belonging to the Bronze Age of the lake pile-dwellers, perhaps, even, he belongs to the considerably

more recent time of the Iron Age of Hallstatt and La Thêne which dates back only 2,500 to 2,000 years ago. Studer, however, is of opinion, when speaking of these discoveries, that these dogs were not local breeds but had been introduced there, in the prehistoric trafficways, from the North East.

The Northern dogs, especially the "Laiki" of Russia and Siberia, must be retraced to the C. Inostranzewi as their root. These however exhibit many differences, in size and other external features, as well as in the way in which they are employed. The particulars given about their size vary from 22" to 28" in height of back, their skin is generally covered with a thick smooth hair, with shades varying between a beautiful golden yellow and the usual colouring of the wild dog. The graceful bird dogs of Finland are undoubtedly the result of a fusion with moorland dog blood, and, as their name shows, are chiefly used in the pursuit of feathered game, but have, for instance, scarcely one half of the dimensions of the "Laika" types of Russia who are used for wilder hunting, especially for that of the bear. The latter serve, so far as they have not been replaced by our present day hunting dogs, (as in the vast Western Territories), for hunting, but they are also employed as watch dogs, especially in the Ukraine; as I heard from soldiers on the Eastern Front. The Siberian Laiki, usually a little smaller in size than their Russian relatives, had no doubt occasionally some moorland dog blood in their veins as well and, having, again been frequently infused with wolf blood, they served both as watch dogs and for the hunt, and even often for rounding up the reindeer herds; but they were used especially in the sledge teams. Their near relatives are the dogs of the Greenland Eskimo, the Laplanders and also the Iceland dog, the last two of which are of medium size standing barely from 16"—18" in height. Finally the Norwegian Elkhound (Dyrehound) called in Sweden Grä or Elghound, (of which a large number of remains have been discovered in the "tumuli" of the old Germanic tribes on the Scandinavian peninsula), must be considered as a branch from the Inostranzewi trunk, but it is also found in the North Western territories of Russia and serves, like the Russian Laika, as the maid of all work. Only a little while ago, as indicated by his name, he was the hunting dog par excellence. In the wide districts of Jemtland, Dalarnes and Middle Norway he is, furthermore, the most reliable and consequently the most popular watch dog among the farmers, while in some mountain valleys he is also used as "Vallhund", that is, watcher of the flocks and herds. We must leave it to the future to decide whether this dog, so closely resembling the shepherd dog, is indeed related to the Inostranzewi branch, or rather, whether he is not a pure descendant of the Poutiatini trunk, having been preserved uncrossed in his native land. To me the latter seems more probable. (see picture No. 10).

Besides the aforementioned dogs of the North, the shepherd dogs of the larger types can be traced back to the C. Inostranzewi, which makes this ancestor of special importance to us. Probably in that line there has been another cross breeding, not only with Pou-

tatiini blood strictly speaking, but previously with blood of the dogs of the Bronze Age. I shall return to the herdsman's dogs, further on because, on account of their blood strain and of their work they are intimately connected with the shepherd dog family. Suffice it to say here again, that the Great Dane-like dogs must be traced back to the Inostranzewi, probably also through the herdsman's dog and the "Ruden" (the large Northern type), perhaps even, without their intervention; at all events, however, through the intermediate stage of Nehring's *Can. fam. Decumanus*, who has been proved to have been a companion of the German tribes during the Hallstatt period about 2,500 years ago. Moreover they can retrace their descent through the herdsman's dog, the Newfoundland dog, and the St.



Fig. 7. East Siberian Laiki, sledge dogs of the German South Polar Expediton.

Bernard dog, which latter was bred by local influence in a certain direction from the Swiss dairyman's dog and was later on "perfected" through the activities of amateur breeders. Furthermore, the poodles have come into existence from the herdsman's dog stock and by crossing with hunting dogs during the Middle Ages.

We now come to the most important prehistorical dog for our purpose i. e. the *Canis fam. matris optimae Jeitteles*, ("the dog of the best mother"), as his discoverer Jeitteles call him, on account of his mother, or the dog of the Bronze Age as he generally known after the prehistoric places of discovery in the Bronze Age. The knowledge of the use of Bronze, an alloy of copper and tin for the making of weapons and tools of all kinds was introduced into

Europe from the East. In the Babylonian and Asia Minor sphere of civilisation, bronze began to replace stone about 6,000 years ago; thence it made its way gradually to the West, following the course of the Danube and its tributaries, till it reached the lake pile-dwellers settlements of Switzerland about 4,500—4,000 years ago, and Northern Germany still later. About 1,500 years ago, bronze was finally superseded by iron in the lake pile-dweller's settlements, while in other places, its vogue did not last so long, for the use of iron succeeded almost immediately the use of stone.

The earliest relics of the dog of the Bronze Age were discovered by Jeitteles in the Bronze Age discoveries at Olmütz in Moravia. The first find was soon followed by numerous others, all at first belonging to the Bronze Age strata at Troppau and in other Moravian

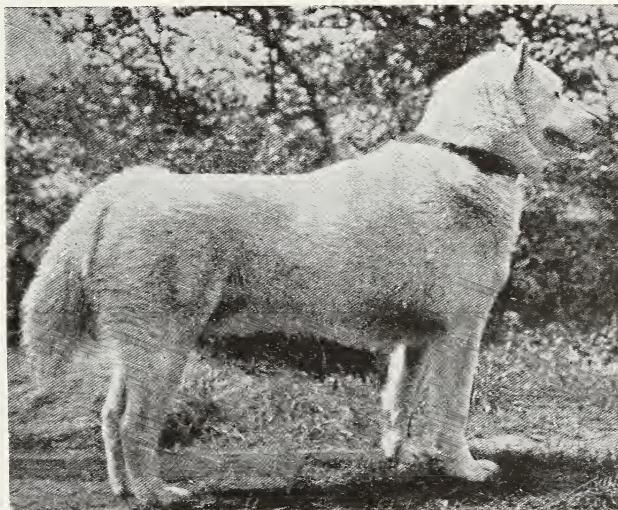


Fig. 8. Eskimo dog from Greenland.

places; then in Lower and Upper Austria, on the shores of lake Labour, in Pomerania near Wurtzberg, and in the Bavarian Upper Palatinate; then further, on Lake Starnberg, near Roigheim in Württemberg, and on the shores of the greater number of the Swiss lakes, including those in Western Switzerland; finally also, near Modena in Italy, in Holland and in Limerick, Ireland. Most important of all are the discoveries in the mounds among the marshes in North Holland and Friesland. These mounds (*Terpes*) are small hills in the flat country, forming places of refuge in time of the frequent floods. They were used as settlements until the beginning of the Middle Ages. The excavations among these *Terpes*, where remains of the dog of the Bronze Age were found in large quantities, follow closely, in the opinion of Keller, the discoveries made in the lake pile-dwellers' strata, and form a

transition from the prehistoric to the historic epoch of that country. Cattle and sheep raising were of the greatest importance to the inhabitants of these mounds, and, from the large number of sheep bones found there, (of which apparently there existed several distinct types in those parts), sheep breeding of the very highest order must be presumed. Just as these discoveries of the relics of the dog of the Bronze Age in these mounds bring him right down to historical times, the same is confirmed by the discovery of a skull in the excavations of Roman relics near Könisfelden in the Argau, in Switzerland.

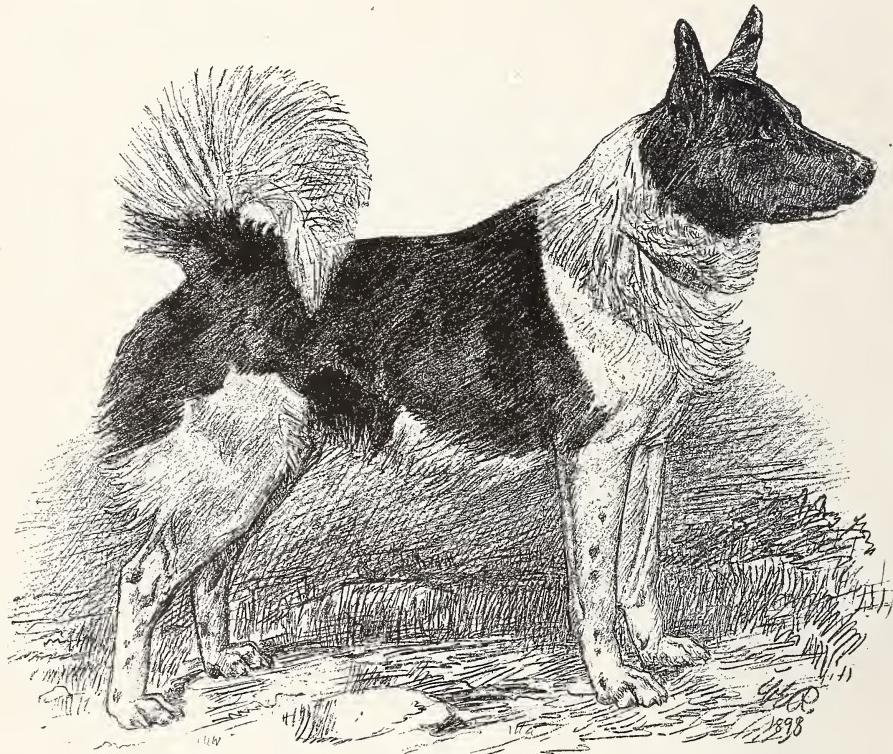


Fig. 9. Iceland dog.

Although we encounter the dog of the Bronze Age in Europe for the first time in the Bronze Age, the race has been proved to have existed at a much earlier date. The excavations in the oasis of Anau have, as first reported by Duerst, demonstrated this fact. Anau is situated near Askabad, East of the Southern point of the Caspian Sea. These excavations of domesticated animals at Anau are of special importance, because, from the alluvial deposits there, the period of these prehistoric relics can be calculated to a nicety.

Now the oldest relics of the dogs of the Bronze Age, found in the Anau hills, were discovered in the strata deposited in the fifty-

eighth century B. C., that is about 8,000 years ago. Moreover, it is evident from the discoveries, that the dog of the Bronze Age was not first domesticated there and at that time, but had been introduced from outside as a finished and perfected breed, together with the growing herds of the tribes formerly inhabiting that region. The fact that a new and improved type of sheep appears at the same time supports our contention. The real age of the race must be reckoned as considerably earlier, especially as they are in close connection with the Poutiatini stock.



Fig. 10. Norwegian Elk-hound.

Whence did the dog of the Bronze Age arrive then? No doubt from the North, as has been indicated by the oldest place of excavation, where traces of his stock, the C. Poutiatini, have been discovered. Hizheimer also attributes to him South Sweden and North West Russia as the area of his origin. As I have already hinted, the Elk-hound of Scandinavia, who in that case would not belong to the Laika stock, might possibly be a descendant of this original form, left in this home area. It is now a matter of common knowledge among scientists that the North is the area where every living creature has been led a higher development. The South with its abundance does

not endure the struggle for pre-eminence which forces the creature to higher planes. Types which migrated or were pushed there remain there stagnant, they never reach the same degree of evolution as their kindred who have been developed to their fullest possible fruition in the North. The glacial period created those conditions of selection. The ice, encroaching from the mountains and the North into the adjacent plains, restricted all life, and forced the human tribes and animal species to migrate and to make increasing use of their scanty means of subsistence, destroying everthing that could not adapt itself. When the ice receded, the living creation followed in its wake, and reoccupied the newly-conquered territory, only to be driven again to a new migration and selection with the recurrence of the glacial epoch.

But to resume, the dog of the Bronze Age has, also, spread from the North and afterwards from the East over our hemisphere. In the excavations of the buildings of the lake pile-dwellers in Switzerland, where up to the present he has been most carefully studied, he appeared already under new conditions of existence. The pile dwellers of the Stone Age were still mostly hunters and cattle raisers. The later Bronze Age people there, on the other hand, tilled the ground and bred smaller stock. Thus they introduced a new breed of sheep, which has not yet been discovered in the excavations belonging to the older pile-dwellings, and which, when compared with the smaller old time moorland sheep, were larger in size and produced a finer wool.

Just as in olden times the first appearance of the dog of the Bronze Age at Anau is connected with the appearance of a new breed of sheep, (as we find later on in the discoveries made in the Dutch "Terpes"), so it happened also here in the pile settlements of the Swiss Bronze Age. The conclusion therefore is obvious, i. e. that the dog of the Bronze Age, the ancestor of our present day shepherd dogs was already there, and in closest connection with the smaller stock. It must be thoroghly understood, however, that we have not to consider him as the tending dog, in the current meaning of the word, but as the watch dog of man's most valuable possessions which, at that time, were his flocks and herds. In addition, he no doubt served also, as has already been said in regard to the Elkhound, as a personal protector and a hunter. The smaller moorland dog, the lake pile-dweller's Spitz who, no doubt, was the same old yelper as his present day descendants, may also have taken with him his share of guard duty in the settlements.

The extraordinary expansion of the dog of the Bronze Age, as above explained, serves to afford a very simple reason for the complete similarity which exists between our present day European dog races, for, it must be once more emphasised, our present day shepherd dog is the immediate descendant from the dog of the Bronze Age and, through him, of the C. Poutiatini.

The similarities in the skull proportions of both dogs are such that no other conclusion is at all tenable. This is also confirmed by

later discoveries in the "Terpes", leading back to historical times, and by the aforementioned skull from the Roman excavations near Könisfelden. This latter skull exhibits all the leading features of the skull of the dog of the Bronze Age, and manifests a perfect resemblance to the skull formation of our present day shepherd dog. Studer wrote to me on this matter, "there is certainly no race of which the racial characteristic has remained so constant. The Roman discovery (Könisfelden) completes the chain of evidence in favour of the theory that the same form has continued from the oldest times up to the present." In a later paragraph I intend to speak about the discoveries in the cave at Steinau, belonging to the time at the close of the Middle Ages and the dawn of modern history. They form the further connection up to the time when the sheep dog took over his present responsibilities, the duty of tending the sheep, which is his noblest and most congruous vocation.

This Third Century fresco from the Catacombs of Pope Callistus shows us that, already in the time of the Roman Empire, our shepherd dog was being utilised to work with cattle. The artist however has indeed given us a better idea of the Redeemer of Mankind than he has of the animals. For this picture, as well as for others which appear later, illustrating the pastoral life of Hungary, I am indebted to the kindness of Dr. E. V.

Rodiczky, Councillor of Alag in Hungary. A most beautiful sketch of ancient pastoral life is given in a particularly striking way by a very old Greek artist, which, with the sketch that follows, was lent to me through the kindness of the artist, R. Strelbel. The dog here depicted may very well be guarding a flock of sheep in South Germany at the present time. Other ancient Greek sketches show us an unmistakeable picture of the dog of the Bronze Age, which we have already rightly described here as the shepherd dog. The various pictures at our disposal show us that they were valued as dogs of the chase and were named after the districts to which they belonged as Cretan, Locrian, Spartan, or Lyconian dogs, which last are said to be have been the smallest and the swiftest. The well known warning "Cave canem" (Beware of the dog) bears



Fig. 11. "The Good Shepherd", from a fresco about 300 A D in the Catacomb of St. Callistus, Rome.

testimony to the fact that the shepherd dog served as a watch dog in the days of Imperial Rome.

Previous to this digression on the pictures of ancient Rome, I spoke of the proved similarities, recognised in the skull formation of the dog of the Bronze Age and of the shepherd dog, as irrefutable evidence of a common origin. If artificial breeding may have had a



Fig. 12. Pastoral scene from ancient Greece.

resemblances and likenesses of form. Thus, although the sea-mammals, for instance, have adapted their outer shape to a life in the water, by assuming the most suitable fish-like form, the distinguishing differences in the formation of their skull have never been changed by those influences which altered them externally to such a degree.

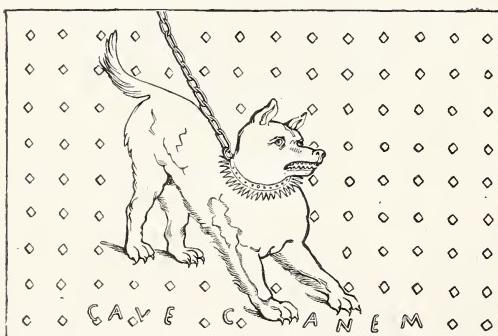


Fig. 13. The shepherd dog as watch dog in ancient Rome.

Complete identity, however, is not to be met with; for in the proportions and dimensions of the leg bones also there are important differences. One may therefore, in comparing the C. Poutiatini and the present day dingo, speak of two very similar, yet very different species of wild dogs. The C. Poutiatini stood high on his legs and showed therefore a more proportionate body than the dingo, and had, as well, a finer cut muzzle. He was, accordingly, of more

great influence in producing certain alterations, especially with regard to the length and width of the skull, the marks, on which scientific skull comparisons are based, have, nevertheless, remained ineffacable. The infusions of foreign blood even 'nay be exactly gauged and tested in these variations. No doubt selection, whether natural or artificial, and similarity in the conditions and duties of life can produce, even in members of different stocks or races, certain exterior

In the proportions of the skull of the C. Poutiatini, the ancestor of the dog of the Bronze Age, of which, by chance, a nearly complete skeleton was found near Bologoje, Studer notices, (with the exception of the sharp incline of the forehead to the cranium), a striking similarity with the proportions of the dingo skull especially, and in the jaw as well.





graceful appearance than the thickset Australian with his blunt snout. Relics of wild dogs of the glacial period, found in various other places, unfortunately however only in fragments, may be traced back to the C. Poutiatini, whose sphere of diffusion must therefore have been very large, as was the case again with the dog of the Bronze Age, who must be considered as a fully tamed branch of the Poutiatini trunk, and a genuinely domesticated dog.

Writing of these two prehistoric dogs, Studer says, "Both have the same type of skull, but in the case of the dog of the Bronze Age, it is somewhat elongated in all directions. In his case, the skull has become loftier; the median line at the forehead has gradually disappeared and the flat forehead continues to the back of the nose bone with an equally gradual descent. Moreover the rear height of the muzzle is higher than with the C. Poutiatini. With both, the fangs have still the same length as the molars." The Table on the opposite page taken from the work of Studer, representing the skulls of the C. Poutiatini, the dog of the Bronze Age, the shepherd dog and the wolf, in side, and top view, will assist in verifying these statements by actual comparison.

The C. Poutiatini, (to whom as their ancestor, our shepherd dogs may be traced back through the dog of the Bronze Age), belongs to the genus *Canis* proper and to the sub-species *Lupus*. The wolves in all their kinds are a species varying greatly in structure and skull formation, size, colour and in other respects. One may find, even in the same territory and under the same conditions of life, specimens widely distinct from each other. Studer knows of no canine, and even of no other living wild mammal, whose skull shows such variations, but it must be clearly understood that the marks distinctive of the kind remain the same. He concludes therefore that the different sub-species that have been ranged beside the genuine *Canis Lupus* are only so many varieties of the one kind, diffused over the whole Northern zoological territory including India.

As regards the wolf, properly so-called, it has been attempted to fix distinctions between the "forest wolf", and the "wolf of the steppes". The former is supposed to be larger, more powerful, more thickset and the more strongly built, with smaller ears and a broader nose, which admits of greater capacity for scent, so necessary in his forest home. The latter, on the other hand, is said to stand higher, which would make him fitter for a tireless lope; he is said to be on the whole, however, smaller and lighter in build, and his eyes, which he would use a great deal on the steppes, situated more in the front; his ears are said to be larger, and the head as a whole to be more elongated and therefore to have a nobler expression. But, as already said, both types are undoubtedly found and are neighbours in the very same territory, which may be explained by the fact that the wolf is a robber with a far-flung area for his depredations and frequently changes his abode. I consider the distinction, thus made, to be artificial, especially in so far it tries to justify itself



Fig. 14. *Canis Poutiatini*, (from Bologoje, near Moscow).



Fig. 15. *Canis fam. matris optimae Jeitteles*, dog of the Bronze Age, (lake pile-dwellers at Greng, on lake Murten, Switzerland).



Fig. 16. German shepherd dog.



Fig. 17. *Canis lupus*, she-wolf from the district of Smolensk.

on the a priori reasoning that the senses must serve different purposes. The fundamental sense of the wolf, as with all dogs, is the smell and not the sight. He, who to-day tears about the forest, and to-morrow will cross the plains for other forests, or will make his home under a shrub on the steppes, or in the dense and high jungle growth on the banks of the river, cannot select at will one sense to-day and another to-morrow. The olfactory nerves find moreover in the narrower but elongated muzzle the same possibilities of development as in the shorter and broader one, but the elongation of the skull would also have an influence on the position of the eye. Some people attribute more bulk to the peaceful animals of our home country, such as the hare and the doe who prefer the woods and will find there more convenient facilities for food, while others are sceptical about it; but for the far-roaming robber there will be no two opinions about this. The difference in shape might be simply explained by the fact that the wolf, who appears, it is true, already towards the close of the Tertiary epoch, about 2,000,000 years ago, is nevertheless of a comparatively recent family which has not yet entirely completed its evolution. His mode of living, which favours a continual pairing between the two types, has by no means allowed him to fix on one particular form.

Studer sees in the *Canis Lupus hodophylax* (the smaller of the two types in Japan) the purest representative and descendant of the larger species of the original European wild dog of the glacial period. According to Nehring, there exists a great similarity between this "Jap" and the Indian *Canis L. Pallipes* from whom, in the opinion of Jeitteles and Haeckel, the dog of the Bronze Age has descended. This Indian wolf corresponds in size somewhat to our medium sized shepherd dogs. He is well built and has an exceedingly swift gait; the cranium shows less curvature than that of the genuine wolf, and the shape of his head is more like that of the shepherd dog. His colouring varies from a pale yellow to brown with a slight blackish hue; the end of his bush shows the black tip ("pompon") of the wolf-coloured shepherd dogs. The upper part of the tail near the root shows the well known black triangle, the "hall mark" of the wild dog which appears also in our sheep dogs.

Considering the great external similarity between the different kinds of wolves, it will be sufficient to give a picture of the principal species, the wolf proper. The different snapshots give a good idea of the previously mentioned strong tendency of the wolf to variation in build as well as in skull formation. The strong Polish dog-wolf, killed by Countess Bothmer when on his "run" into Posen territory has been photographed after being stuffed. In stuffing, the legs, especially the hind legs, were apparently not skilfully treated and a view has been taken which makes the body appear foreshortened. For the sake of comparison with the trotting wolf, I have added the picture of a highly bred shepherd dog at the same gait. The perfection of the build of the dog's body, which is the result of high breeding,

and which secures for him the advantage of a longer stride and of greater endurance and pace, is clearly brought out in both pictures in spite of close similarities. Over the same similar course (Krabbe von der Uetzenburg, S.Z. No. 5855, whelped 20/II/08), would beat the wolf, (unless the higher standing and consequently longer barrelled and longer legged wolf could overcome the handicap), because he can cover more ground at every stride. Further on, we have also placed the head of a mighty male-wolf, beside that of an equally strong shepherd dog of South German breed. (Audifax von Graffrath, S.Z. 368, HGH., whelped 29. 10. 01.)

The wolf has the powerful long stretched build of the running beast of prey, enabling him to maintain a tireless trot. The high foreleg, the result of well-developed withers, gives him longer joints for the muscles of the far-reaching front members; the hind leg is perfectly adapted for correct understepping and also, thanks to slight upward curvature of the back, permits an enduring and space-devouring gallop. Favourable development of the limbs gives an excellent reach and enhances the possibility of making such extraordinary progress. The chest development is, as with all wild dogs, less prominent, which is the case too with our domesticated dogs, though bred to have a deep chest. The body gives a barrel-like impression, the front limbs appear to the eye to be placed further under the body than is the case with the dog. The front paws, which occasionally must serve the purpose of digging, are, like the front limbs, from the ankle downward, large and extraordinarily powerful. If we examine the track of the wolf, it is seen that he steps with a closer splay of the middle toes than the dog, whose splay has become softer and more yielding. Shepherd dogs, accustomed to strenuous running, and having in consequence well-closed paws, step considerably more like the wolf than the dog whose track is illustrated on one of the following pages. Unfortunately it is unknown to what race this dog belonged; judging by appearances, it must have been a large and heavy animal.

Like all wild dogs, the wolf steps on an imaginary straight line, showing his tracks on, or within the line, or very close to it. The opposite to this gait is the waddle, when the single steps stray more or less from this imaginary middle line. This is especially observable in strong specimens of greedy bulging animals or of she-wolves in whelp. Something similar may also be said of the step of our domestic dogs; heavy short-backed broad beamed races generally waddle, while for our shepherd dogs, the straight step is the rule. The side fling of the hind leg observed in some domestic dogs, whereby the hind leg does not follow on the track just made by the corresponding front leg, but even crosses over this middle line to the side of the opposite front leg (in extreme cases even beyond the track of this leg), has no relation to the modes of stepping just described. If dogs with long barrelled natural build show this gait occasionally, it is no doubt only for temporary relaxation of the swaying side or on



Fig. 18. Wolf (*Canis lupus*), from a photograph by O. Anschütz, Berlin, with his kind permission.



Fig. 19. Wolf from Poland.

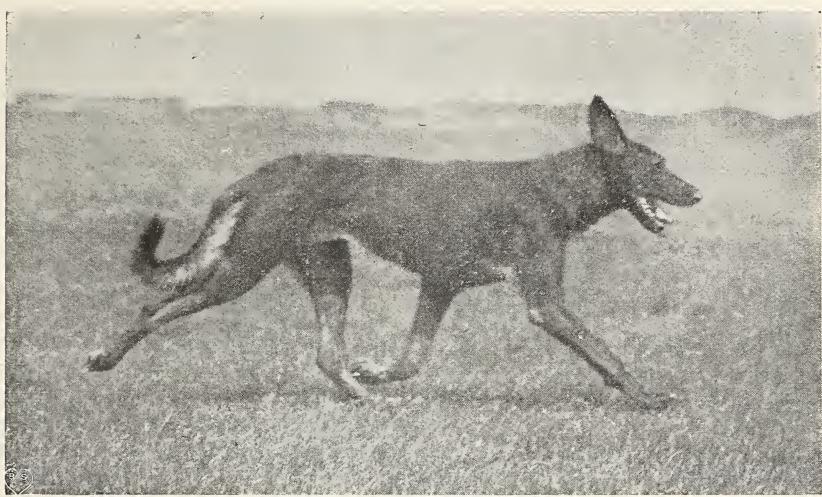


Fig. 20. German shepherd dog.



Fig. 21. Wolf from the Carpathians.

account of the slight unevenness the ground, to which the dog's body, with its yielding vertebra, can easily adapt itself. It would certainly be possible to observe this occasional sway of the hind leg in the wild dogs as well, if we were in a position to do so. If, however, dogs with short and thickset bodies, already bred for a purpose other than the original, over-step to one side this is only a natural consequence of their short backs, for these dogs would overstep their own heelpads, if they walked otherwise.

This narrow gait is of great importance for the shepherd dog, because the dog who works the sheep and has to keep them off the fields must run in the narrow furrow border of the ploughed field lest he injure the crops himself. My former remarks, in explaining the pictures, that the highly bred dog, because of his limbs, would surpass in swiftness and endurance the robber running at liberty, whose chances of existence depend on his legs, may at first appear conflicting. We must, however, fully understand that the wild animal possesses all the gifts which man, of set purpose and in accordance to his plan with regard to the domestic animal, has developed by breeding. In such plans indeed we are influenced not so much by anxiety for the animal and its well-being as by the convenience and profit which we desire to derive from the breeding. Besides, and in addition to precocity in development, which would secure for us a quick return, the object in our breeding varies greatly; in cattle, it is milk productiveness and flesh forming possibilities; in sheep, quality of wool and mutton; in the pig, fattening propensities, in the horse, ease and excellence in speed, and heavy draught power. Except for the dog, and the horse, in the case of the understanding owner, we present-day progressive and civilised people, however, consider our domestic animals scarcely higher than machines, for if by the use of such, or by the retort of the chemist, we could attain the same results, who would think twice about it? or at the utmost, in the same way as ants regard their milking cows and the aphis which they carefully look after because they produce their honey for them. No wild animal possesses the same capacity as the domesticated high-bred corresponding relative. This fact has been clearly brought out by von Wissmann in his description of a hunt of African wild horses: "in spite of all their efforts, they were unable to get away from the hunter on horseback, whose mount had to carry, in addition to his rider, a pack which was by no means light. They were hunted to a standstill". Thus too the wolf is caught by the Russian Borzoi.

While comparing the head of the wolf and of the shepherd dog, the following essential exterior distinctions may be observed. The highest point of the wolf's head is on the cranium between the ears; while with the shepherd dog, it is on the forehead very near to and above the eyes. The eye of the wolf is in a different position, more to the back and to the side than in the case of the dog. The ridge of the wolf's nose shows the moulding of the wild dog, and, just in front of the eye sockets, the wolf's muzzle appears to be tightly drawn,

Fig. 22. Tracks of (a) a she-wolf (one year old) compared with (b) those of a full-grown dog,
(from Brandt's "Fährten- und Spurenkunde"), published by Paul Parey, Berlin.

a

b



somewhat narrower than the part adjacent, to provide room for the fangs which are much more developed in the beast of prey than in the domestic dog. The two fangs in the upper jaw are stronger in the wolf; they grip from behind and in front, over those of the lower jaw and force also the line of the lip to bulge in front. The illustrations 16 and 15 (opposite page 31) give one a good idea of these features. In consequence of this, the wolf's head when viewed from the front does not appear so wedgelike, i. e. tapering from the back to the front, as the shepherd dog's head, but resembles more in formation the bill of a duck which is narrower at the base than at the end. This feature naturally cannot be seen very well in the side views in our pictures, but can be observed to much greater advantage in the picture of the Carpathian wolf. I was able to observe this formation as well in a descendant from a wolf in the second generation, in Wolfi, von Wolfsnest S.Z. No. 65.

These exterior distinctions are the result of variations in the skull formations, that may be observed in the skulls illustrated in plates 14—17. The bulging of the forehead in the case of the dog is a consequence of the development of the air-containing cavities of the forehead. Owing to an extension of the brain pan, (and increase of the cerebrum has an important bearing on mental capacity), these have been forced to the front and above the forehead; and this is due to his domestication, which means greater progress in comparison with his wild ancestor. We find more about this in Chapters 2 and 5. In spite of the bulging out of the forehead, the tapering from the skull down to the cheek of the dog remains uniform, because the dome of the forehead has only a very slight subsidence. This is the reason why the dog has the highest point of the skull just in front of the forehead, from which it inclines towards the face and the back of the head. By the extension of the cranial cavity, the eyes have been pressed from their lateral positions more to the front. Studer attributes this also to domestication, saying that the domestic animal, living in more secure conditions of life, was no longer confronted by the necessity for an endless *qui vive* for the sake of the safety of his flanks and back, but rather now, as he fastened his glance mainly on his master, the eye accordingly was allowed to follow the protuberance of the cranial cavity, without the risk of harm to its possessor. Studer gives, as a further explanation, the tendency of animals that have been long since domesticated to retain the marks of the wild species, which they had in their (the wild species') youth, which also explains the hang and droop-over of the ear in most of our dog races. Studer has also been able to observe in the skull of young wolves a less slanting position of the eyes.

In the skull of the wolf, the frontal cavities have not protruded to the top and the front in the same way as in the dog. Sometimes, however, they bulged out at the temples but not in the middle of the forehead. This produces in the wolf's skull, in a greater degree than in the dog, the central subsidence in the front of the forehead which



Fig. 23. Head of a wolf,
from a photograph by O. Anschütz, Berlin, with his kind permission.



Fig. 24. Head of a German shepherd dog.

has been called "the axe cut" (*coup de hâche*). The smaller extension of the cranial cavity to the front leaves the wolf's eye in its more slanting position, which affords it a better protection, so necessary for the animal when passing through the undergrowth, the reeds and the dense stubble of the steppes. He must also be on guard against all surprises from the flank and the rear, and this produces in the animal's eye this false and treacherous expression so different from the frank and open gaze of the dog. In the wolf's skull the arrow-like depression (*crista sagittalis*) running towards the neck, is considerably more developed. This feature is the place for the retention of the muscles of the lower jaw which have to be a far more powerful on account of the wolf's habit of tearing and lacerating its prey. This feature, together with the lesser bulging of the brow, emphasises too the impression of a larger swelling of the skull towards the cranium; but as already said, the shape of the wolf's head is full of extraordinary variation because of the number of the different species. Next to the wide and full, but short heads, we find also some more elongated, that appear more noble because more dog-like.

The wolf has, like our shepherd dog, fairly long, hard, smooth hair with a thick down, and occasionally a heavy mane-like growth on the jowl, that makes the head appear still more massive, especially in the old dog wolves. In colouring too, we find in the wolf and in his subspecies the same foundation colours and marks as in our shepherd dogs, or more correctly, vice versa. They vary from light grey through yellow, yellowish-brown or yellowish-red hues, which are usually flecked with black, to dark and even full black shades. Except for the latter, these colours are for him a kind of "field-service jacket", which camouflage him at very short distances, if not actually trotting over an expanse of snow. In Greenland there is also found a white variety.

I should like here also to observe that in the case of dogs crossed with wolf's blood, (with genuine wolves I have had no experience in this respect), the fresh smell of the skin is strangely wild, quite different from the skin evaporation of our dog. I have been able to ascertain this at various times with the above mentioned Wolfi von Wolfsnest; while it is said of Phylax von Eulau, (a Thuringian shepherd dog crossed with wolf's blood, in the last decade of the last century, and who fortunately has been of no importance for our breed), that he made Exhibitions quite unsafe, wherever he went, because as this "dog" passed the Borzois, these wolf hunters chained to their benches, always raised the devil; while the sight of our shepherd dogs could never disturb them in their aristocratic repose. The only possible explanation for this is that the wolf-smell of Phylax stuck in the noses and awoke the instincts of the Borzois. Liepmann reports of his shepherd dog, that, after lying quietly under the seat of a railway compartment, he furiously barked at a new-comer, although towards other passengers he had remained perfectly well behaved. The object of his wrath eventually turned out to be the wolves' keeper in the

Berlin Zoo, who carried the scent of his charges about with him. He declared that he had often experienced a similar reception from other dogs.

"Genuine dogs" i. e. all wolf-types and domesticated dogs, (including the dingo and also the jackal), have no objection to sexual intercourse with each other, and will bear "mongrels", which are both "potent" and "fertile". There is not, however, sufficient evidence of unions between the afore-mentioned kinds of genuine dogs and other wild species; though now it would be possible to make these experiments by means of artificial fertilisation. The fruitful union between dog and fox has often been reported, but could never be absolutely proved. No doubt, attempts at breeding between domestic dogs and pet foxes, who have frequently become excellent friends, may have been made, but from aspiration to realisation is "a long, long way". There is no real evidence for the success of such attempts. Male domestic animals, which are sexually very irritable, can often be observed attempting to gratify this instinct, *faute de mieux*, with the most incongruous partners e. g. drake with hen, dog and woman, and even dog with dog. There is, however, no absolute proof for the so-called fox-mongrel, of which hunters and shepherds sometimes boast, until it has been definitely shown, *de facto*, and scientifically proved, that, after taking all possible precautions, a fertile union between dog and fox has been consummated; or, until the scientific examination of the skulls of such mongrels has exhibited the hall marks of each type; or, at the very least, until their running together has been really observed. For it is just in the structure of his skull and his teeth that the fox differs radically from the genuine dog. In conclusion, I cannot imagine what profit the dog family can possibly derive from a union with the fox. This union formerly has often been presumed, it is true, not for scientific reasons but undoubtedly as an idle boast, or in order to raise the market value of the so-styled freak in the eyes of the simple. I shall further on have occasion to mention the fairy tale of "the beautiful wolf and the common shepherd dog", that can be included under this head. The fact that we meet occasionally with dogs reminding us in appearance, expression, ways, and their movements absolutely of wild dogs, wolves, and jackals, even occasionally of foxes, is not all at to be wondered at. Appearances of "throw back" are by no means so very rare. They can go back in the case of our own domestic dogs down to the partial reappearance of the ancestral form, which is not known to us, just as e. g., horses have been found occasionally that exhibited stripes, and even toes belonging to a far remote ancestral type of the genus *equus*, although in the development of the genus they have contracted to form one hoof. Most careful selection in breeding in which, however, intense and long inbreeding must be strictly avoided, should exclude an undesirable throw back to an ancestral type more or less remote, because such appearances and throw backs, showing similarities to the wild dog, are generally to be observed in neglected animals. As regards ways and expression in animals not properly

bred, or even ill-treated, these are especially noticeable in old dogs and their progeny, when they have been living an unnatural existence in confinement. Similarity in structure to the wild dog is, however, sure to be found among the curs that are left entirely to their own devices. The taxes which have nearly everywhere been raised during the last ten years, and especially during and since the Great War, have fortunately almost done away with these ornaments of the Canine family, though in many parts of the town and countryside there are still plenty of them, pinched and dwarfed by hunger and misery, as were the first tamed domestic dogs in olden times; they are the product of free-love on the most modern and broadminded scale, and are all convinced Bolsheviks in creed and conduct. In such creatures, weak in build, it would not be at all astonishing, (considering the mixture of races represented in them), if something similar to the original type of dog did not come to light, if only in a dwarfed form.

If in the very remote times of the domestication of the dog, man paired his already tamed companions with their wild relatives of the same or similar family, or allowed them to form a union; this was a proceeding made necessary for the purpose of propagating the breed. Blood infusions or reinvigoration of the blood in such a way was natural and cannot have changed anything in the ways and qualities of the products of the breeding, because what man made use of in the dog in those days were his qualities as a wild species, which only in the many succeeding eons of domestication grew to become what to-day we prize as canine qualities.

I have already said that it was possible to recognise the effect of breeding in the moorland dog of the lake pile-dwellers of the neolithic epoch, which had made a certain division in races possible. I further remarked that in other places they had purposely infused it with the blood of a large wild dog of another original race i. e. with the blood of the wolf.

This of course did not happen only once and in one place only, but has been repeated many a time and often even up to historical times and is, no doubt, practised to this very day in the high North with the half savage dogs of those uncivilised people. The matter is not so very simple; we have read in former reports that the bitch on heat had been simply bound to a tree in the forest for the purpose; I fear, however, the owner the following morning only found the empty collar string; but in case the bitch was still there and later on whelped, certainly a roaming dog and not a wolf had played the good Samaritan; for the wolf always greedy for a joint of good dog, might, in case he found such a captive bitch, first have served her and then certainly ate her, naturally out of pure love. Higher sentiments are absolutely unknown to the ever-hungry wolf; the hunting pack devours immediately their own comrade killed by a bullet, and it is reported, even of the Northern dogs, that, in times of hunger, they will tear to pieces weaker or ailing dogs, and eat without the slightest disgust those that been killed for their food.

The infusion of wolf's blood would therefore always demand some precautions and is practised no doubt only with tamed wolves, captured young and kept for that purpose. The purpose of such crossings was always the same i. e. to strengthen the weaker domesticated kind through the wolf strain, in order to make them more powerful and sharper, fitter to ward off and fight the beasts of prey that menaced their master or the possessions entrusted to their care, which were generally flocks and herds. The theory that what was suitable without any harm to the dog race was then consequently right from the point of view of the dog breeder will not hold water to-day. A sharp cleavage has been achieved between our house dogs living at home, and their wild cousins living at liberty, by a separation lasting for eons, by a life lived under vastly different conditions, by a mental development, which is a consequence of intimate connection with man, and, last but by no means least, by a special selection for the purposes of breeding. This cleavage not only touches, as we said above, the exterior build, but also, and above all, the characteristics and inner qualities. Every infusion therefore of wild dog blood which is effected without a scientific motive must be called a sin against our shepherd dogs.

Unfortunately the craving for such crossings, nearly always with the wolf, reappears continually from time to time. Thus our shepherd dogs have been made the objects of such "attempts at improvement" partly from lack of experience, and partly from motives of idle boast, nay even to-day they are sometimes proposed as quite new discoveries, and it goes without saying that such cross-breeding have been made for business purposes. Fortunately, however, this has come to pass much more frequently on the patient paper of the catch-penny advertisement than in reality; for in Germany, at anyrate, there could never have been found so many obliging wolves, as the actual number of fond fathers and mothers, for all the shepherd dog mongrels that have been advertised. Sleepy "Michael", however, continues to have unbounded confidence and esteem for every thing from abroad, and is still convinced that all foreign products must be better, nobler, and above all, more valuable than his own. This is well-known to the "fancy", and dealers are selling with a supreme audacity wonderful "wolf sheep dogs" out of a Russian steppe wolf mother, although they have been whelped in all innocence (?) not far from the sheep fold by "Greif" out of "Diana", or some other fine shepherd dog parents.

Most unfortunately, however, several real crossings have been made and the products of the breeding have been most rashly given into the hands of "lay-people". The chief sinners generally in such cases have been Menagerie proprietors, who know how to turn a penny by leading to a wolf a bitch on heat, or, vice versa, a domestic dog to their she-wolf. I purposely refrain from saying "shepherd dog", not but what the product was always shepherd-dog-like, because the wolf-side, being the stronger sexually, always came to the front and the progeny were always sold as "wolf-shepherd dogs". It natu-

rally occurred sometimes even in such Menageries that a brave genuine shepherd dog was caste for the rôle of the savage killer of "Little Red Riding-Hood", and generally got away with it, because the majority of the visitors at such places are unfortunately eager to swallow all they see and hear, being more credulous than expert, and the poor shepherd dog played his rôle with all the impressiveness and ferocity he could muster for the occasion, inside a cage about two yards square, while after the performance he would couch quite tamely at the feet of the "intrepid tamer" or the general utility boy. Many a broth, indeed, in such cases has been cooked without a bone.

One has only to glance at the following picture to be convinced that there is nothing, positively less than nothing, to be gained by the infusion of wolf's blood for the purpose of adding to the "points" of shepherd dogs. The picture shows an ill-assorted pair, a shepherd dog and a wolf, which were exhibited about twenty years ago in a kennel at Hamburg. We have already previously heard something about the external distinctions between the wolf and the shepherd dog, and we know, further, from the rules of the science of breeding, that a well-proportioned bodily structure, complete and harmonious, such as is necessary for our shepherd dog, when used as "service" dog, can only be secured by pairing, as breeding partners, animals matching one another in points and in blood. We shall give in Chapter 3 further particulars on this point, especially of the all-important consideration of blood infusion, and, also of the infusion of closely related blood.

When the breeding of our race began to be brought to a fine art, which was about 20—25 years ago, the carriage of the ears and tail of the wolf may have given to many of our breeders, (who were at that time inexperienced in questions of Zoology and the science of Breeding), an idea of the usefulness of infusion with wolf blood. Most fortunately, as already said, very few succeeded in carrying out such an idea. "Standing ears and a sabre tail" were then, for the great majority of breeders, the beau ideal of a shepherd dog; though, as a matter of fact, a large number of shepherd dogs fell short at least in one of these two points. Now, while it is true that the wolf has ears that are wonderfully erect, they are not generally beautiful but short, clumsy and coarse, as best suited to a beast of prey, that they may not be injured as he roams and hunts through bush and forest.

Like all other wild dog pups, however, wolf whelps are born with drooping ears. The time when they begin to carry them erect varies just as much as in the case of our own shepherd dogs. In the Cologne Zoo, I saw in 1904, a wolf litter and a litter of small American coyotes, all the latter whelps though only five weeks old, carried their ears erect, while, of the wolf pups that were one week older, only two carried their ears erect; the others had them either altogether drooping, them or nearly so. I also had the opportunity to observe the same in wolf litters at Munich; the wolf pup of Nish, whom I have already mentioned, had faultlessly erect ears when I made his acquaint-

ance, when he was three months old. I hear also from another source that the erection of the ears in wolf pups can take place when they are four, and even five months old. No doubt wolves always have erect ears; while shepherd dogs, to the great regret of their breeders and owners, sometimes fail to show them.

The drooping of the ears, that in all wild species are carried erect, is a consequence and a hall mark of domestication. The domestic animal, living in security has no need to keep its ears continually strained in all directions for self-protection; the muscles of the ear therefore gradually lose their tension allowing the ear at first to sag and then to drop altogether. This consideration, however, only partially effects the domestic dog, because even as a domestic animal living under conditions not entirely alien to his former natural existence, he remained dependent on the use of his ears. The fact that

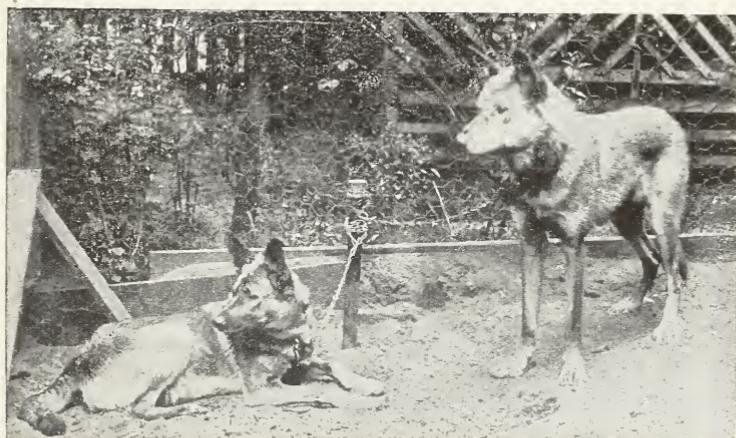


Fig. 25. German shepherd dog (left) and wolf (right).

in spite of this, the larger majority of the dog races have developed a drooping ear must therefore be attributed in the first place, at least principally to the rule, that, as I have already said before, there is a tendency, after long domestication, to revert to the hallmarks of the wild species in their youth. One of such hall marks of the wild dog is, however, such drooping ears; the wild whelp in his secure nest needs his sense of hearing but little, his principal sense of smell leads him with unerring instinct to mother and milk. The eye, as everyone knows is the least acute organ used by dogs, and comes into use still later than the other powers; all puppies are born blind i. e. the eyelid is closed at birth. Now, according to Noach, the shell of the ear is larger in proportion in the wild whelp than in the full-grown animal. If, as in other hall marks, this disproportionate condition is retained by the adolescent domestic dog, the later erection of the

large, wobbly, and sometimes very heavy shell of the ear would occur with still greater difficulty. Noach further explains, that, (in consequence of the lesser necessity for the use of hearing by reason of domestication), a tendency to reduce and flatten the autocyst with a corresponding increase of the shell takes place. He also remarks that the dogs of the North and the shepherd dogs have retained their original large autocyst, just as in both races the frame of the nose is especially well-developed. Others trace in the hanging of the ears and their length a correspondence to the development of the over hanging heavy chops. In the majority of the races finally, breeding has determined the pendulous ear as a permanent characteristic.

These two characteristics are wanting in our shepherd dogs, they have acquired neither heavy ears nor overhanging chops by breeding. Their ears consequently are either fully erect, or more or less pendulous at the tip, or drooping over. Pendulous ears appeared more frequently only in one case, where old German blood had been infused, as in the South of Germany. Therefore we did not, nor do we need any crossing with wolves to improve the carriage of the ear. On the contrary, in wolf mongrels, inheriting the coarser and heavier wolf's ear, it is more to be feared that they would continually droop their ears, because the muscles would lack the strength to keep them erect. This too may account for the pendulous ears of the herdsman's dog type, in whom, as we have seen, wolf blood has been infused intentionally. With the herdsman's dogs who simply guarded and protected the flocks and herds, the pendulous ear may also have proved of use while fighting beasts of prey, as this did not offer such a convenient, vulnerable and painful place of attack, as the erect ear. It may therefore have been bred in these dogs of set purpose. After the beginning of the perfected, purposeful breeding of our shepherd dogs, the carriage of the ear has essentially improved without any further assistance; for, in their purified blood, the primaevial inheritance of their fore-fathers, the erect ear of the wild dog, has again become conspicuous.

For the improvement of the tail, an infusion of wild dog blood is absolutely superfluous. No doubt the wolf living at liberty always carries well his heavy-looking bushy tail, that is from hanging down to a stretched out position. Wolves, however, kept in captivity have been known to acquire bad habits in the carriage of their tail, following the example of idle dogs even to the extent of keeping them erect or carrying them with a perpetual curl, which is a result of wagging the tail, and of frequent elevation in moments of excitement. The best means of preventing these vices, after having once eliminated them, (which by the way do not impair the appearance at all), is to keep the dog hard at work. Formerly, this defect was very frequent with working dogs in many districts of North Germany, perhaps because these stocks had been crossed with moorland-dog descendants, who had a tendency to curl the tail, (I have only to mention the Spitzes for instance), or with other Northern dogs, in whom this failing has been often observed. This tendency, which is generally foreign to

wild dogs, but by no means rare in the domestic species, is attributed to a loosening by noe joints, consequent upon domestication.

The head and frame can only be spoiled by an infusion with wolf's blood, for we know very well how to improve deficiencies in power and size by expert breeding and keeping. Why then continue to-day to infuse with wolf's blood? The character and qualities of the shepherd dog would be thoroughly vitiated, for dog and wolf have no longer anything in common. Sharpness even would not be increased; all we would effect would be to produce shy, and, for that reason, snappy dogs. The shyness of many a dog is of a wild dog character, unless acquired in puppyhood by serious illness affecting its nerves and brain, or by thoughtless confinement to the kennel, like a captive wild animal.



Fig. 26. A cross between a shepherd dog and she-wolf.

Unreliability, shyness and treachery are three essential characteristics of our dog-wolf mongrels to-day. Brooke, an English enthusiast, who kept and constantly observed all the wild dogs, wolves of different types, dingoes, hyenas and others he could lay hands on, wrote to me saying that he would rather have to deal with a wild old wolf than with a wolf mongrel. After the many results of such crossings which have appeared even in the second and third generation, and which have been brought to my notice, I can only corroborate his assertion. In the picture taken of the mongrel bitch, whelped in the Posen district from a wolf about twenty years ago, and resembling in her exterior, (except in her head), her shepherd dog father, the unlovely formation of the head, and an ignoble furtive look is most

conspicuous, and her character is in perfect harmony with her exterior.

It is one of the natural laws of Inheritance that creatures of pure blood, where by proper breeding all unevenesses have been eliminated, far surpass all mongrels. Darwin shows in an abundance of conclusive examples, that cross-breeding leads to deterioration — and that a connection by breeding between unrelated races, or between races whose qualities have been developed in opposite directions, leads to ineradicable degeneration. On this subject he remarks; “Crossing eliminates the virtues of both parent races, the only result is the true mongrel, whose chief characteristic is lack of character”.

To this must be added, the further consideration that the parent belonging to the historically older and stagnant stock is sexually the stronger, and therefore tips the balance in its own favour. The consequences are loss of physical proportion, caricaturing of qualities and talents, which no longer balance or complement each other, thus producing animals which are throwbacks in form and character. This had been already recognised in the old German Jurisprudence, which exhibited the soul of the people; the old Saxon “Mirror” which is framed on the Feudal Law of the Swabian “Mirror”, when speaking about the succession in mésalliances, says, “The children will be moulded by the influence of the less worthy partner”. Hard as this legal maxim may sound, Natural History affords ample justification for it, and also furnishes the best and most convincing counter-balance against our present-day tendency to equalise; the ruling of the people by the people, the dregs; and again, the whispering of peace fanatics, which in the end is only Mammon-worship and is wafted to us by dreamers with no knowledge of the world, subservient slaves as they are to the Might of Bank-balances. The nature and life of individuals, of races, and of the Universe are tuned and made for struggle and for selection.

Physical beauty, which in female descendants of connections with unequal members of the Human Race is often startlingly conspicuous, is generally combined with mental degeneracy. This is a well-known fact. The Law forbidding intermarriage between members of highly cultured peoples with women of a lower race is therefore thoroughly sound and appropriate. It will take twenty years to show the degeneration among the French people consequent on the intimacy of many French women with coloured French subjects. It is a well-known historical fact that intimate connection with another race, foreign to their own, even the superficial adoption of, and identification with their ideas, their conduct and their manners, (which are essentially opposed to their own), may utterly crush a people physically, mentally and morally; highly developed though it be. If nothing more, may this at least teach us poor animal breeders a lesson.

Now let us go back, after this necessary digression, to wolves and mongrels, to the dog of the Bronze Age and to his descendants,

the shepherd dogs. We have discovered the dog of the Bronze Age, as the first comrade of the prehistoric shepherds, already acting as guardian of their flocks and herds. We were further able to follow him in the dawn of history, and to-day he lives in his pure-bred descendants, who are spread over our entire hemisphere and, connected in every instance with rural settlements, with the shepherd and his charges. And yet, in spite of this, he seems to have been driven away for a very long time, up to about three hundred years ago, from this his true vocation of working with the flocks and herds.

To understand this, we must make perfectly clear to ourselves the nature of the duties of the dog with the flocks and herds, and the exact services, his master, the owner of the herds expected of him. The first and the earliest of these duties was to protect the herd, at rest or feeding, against outside interference. The second was to keep the herd together and to prevent some animals from straying at will, especially on their way to the pastures, rounding up the stragglers and bringing them back again to the flock. Finally, the third duty was to protect the adjacent fields under cultivation from the greed and destructive encroachments of the feeding flocks and herds. This last duty is the chief task of the shepherd dog to-day, for he has become both guardian and sentry of the flocks and herds. This service was, however, only made necessary, when, in consequence of the growth of agriculture, larger and still larger areas were tilled and the pastures accordingly reduced. The remoter the times, the more insecure they were, the wilder the land and the whole surrounding country, the more necessary too was the dog for the protection of the flocks and herds, which were their owners' most valuable possessions.

From this triple task there naturally evolved a triple division of the dogs for the service of the flocks and herds, which is recognised to-day, for they act as herd protectors or herdsman's dogs, driving dogs, and tending dogs. It is obvious that the first named service requires dogs which are as heavy and as powerful as possible, while the last named responsibility must fall on the most enduring and the swiftest dogs. When man began to settle down in prehistoric times and turned to agriculture and cattle-raising, the wolf, the bear and the lynx threatened the security of forest and field. To these must be added restless neighbours, or robbers roaming singly or in hordes, who all cast covetous eyes on his property. The dog of the Bronze Age, who was still comparatively small and weak, proved inadequate as a protector against large beasts of prey or human marauders. Studer fixes the basic line of the skull of the dog of the Bronze Age from $6\frac{1}{2}$ "— $7\frac{3}{6}$ " in length, and mentions even a smaller stock with only $6\frac{1}{4}$ " length of skull; while both he and Strebler lay down as a rule that the basic lines of the shepherd dog skull are from $7\frac{1}{2}$ "— $8\frac{1}{4}$ ". I find still somewhat larger dimensions in the shepherd dog skulls in my possession: up to $8\frac{3}{4}$ "; and $7\frac{1}{4}$ " in a six months' old shepherd dog. But this has nothing to do with the skulls of the present-day over-bred dogs with their already elongated muzzle, but with good working dogs of the time when

breeding for breedings' sake just began. We must therefore imagine the former dog of the Bronze Age to have been at the utmost 20' in height from the shoulder to the ground, with proportionately fine limbs, perhaps corresponding to our present day "heath" shepherd dog. No doubt the little spit-fire was sharp and keen enough, but he must become stronger, stouter, and more impressive in size.

To attain this, the former breeder had three alternatives; to take a larger and more powerful domestic dog species to protect his flocks and herds; then, to cross the dog of the Bronze Age with this dog; or finally to cross him with a larger wild dog, viz. the wolf. Probably all three were suitable enough to obtain the desired results. The purpose was to obtain what we call to-day "herdsman's dogs". We give that name to a group of dogs belonging to the Poutiatini stock, who, however differed in exterior points from the main family of the straight thick haired shepherd dog, although they offered many resemblances to him in nature and qualities and had been often cross-bred with him.

As already said before, Studer traces the family of the herdsman's dogs, or, as they were formerly called "Ruden", or large dogs, back to the stock of the Can. fam. Inostranzewi Anutschin. This original form, as we saw, he traces back to an infusion of wolf-blood in Poutiatini stock. It may, however, also have been crossed immediately with the first tamed and domesticated wolf, just as happened later on with the blood of the dog of the Bronze Age, when evolving into the herdsman's dog. I have already explained that an infusion of wild dog blood, at the time when the domestic dogs themselves were still half wild, (as is the case to-day with the dogs of the Northern tribes), was still possible and admissible, from the breeder's point of view. According to Pliny, the Gauls have infused wolf-blood with their domestic dogs. Nehring supposes something similar with regard to the origin of the Can. fam. decumanus, the old Teuton Great Dane.

When dealing with the question of the wild and domestic dog blood of the same or nearly related families, the where, when, and how of this amalgamation need not trouble us. As already remarked, probably all three methods had been employed at different times and places, for the great similarity of our present day herdsman's dogs, which are diffused and are found in such large and distant areas, brings us to the conclusion that their origin is similar. We have already seen that the Can. Inostranzewi himself came in olden times from the East, by way of the caravan route, down to the Swiss lakes. He may therefore have served everywhere for the purpose of "improving" the dog of the Bronze Age. On the other hand, successive prehistoric discoveries do not prove that the family of the herdsman's dog, as distinct from the dog of the Bronze Age, migrated from North to the West, by way of the East. They must therefore be essentially the product of local breedings on very similar lines.

Excavations of relics of old time herdsman's dogs unfortunately have not been made. What we know about them from these remote times is based on ancient pictorial and written records which were

the work of Romans and Greeks, for the whole of our civilisation is unavoidably dependent on this so-called "Classical" Culture. Obsessed with admiration for all things foreign, as our poor "Michael" has become, after shedding his rough old Teuton hide, he prefers rather to grub in alien claims than in his own broad inheritance, which was won for him by his ancestors. He is doubly astonished, and cannot, and will not be made to accept the truth, if at last to-day some of his spiritual leaders lay down and maintain that it is just from people like him, out of the Far North, at the "back of Beyond", all the former achievements of development, culture, and civilisation found their way to other peoples; even as Braungart has conclusively proved with regard to the development of Agriculture. In view of such adoration of the Classics, it is not to be wondered at that in the history of the dog as well, the rather mythical Greek dog of "Molossus" must play an important rôle, as coming from India, Thibet, and Mesopotamia to Greece and Italy, after originating, according to Aristotle from a cross between a tiger(!) and a bitch, to become the father of the herdsman's dogs; though if you look a little more closely, he is the indigenous and settled herdsman's dog of his own home area. Apparently a discovery in the excavations of the Roman camp of Vindonissa of the first Christian era, (to-day the village of Windisch in Argau, Switzerland), was made to serve as an important contention on behalf of the supposition that the Molossus dog is the ancestor of the herdsman's dog. There was found at first an old clay oil lamp, obviously copied from an old Roman pattern, showing the sketch of a barking powerful dog, a large dog of true herdsman's dog expression, and even showing wolf's paws. This seemed to prove the presence of the Molossus dog North of the Alps, and, this too, all the more positively, because a short time later at the same place also, a "Molossus" skull was excavated; but according to the reports of Hauser who superintended these excavations this selfsame skull belonged to a St. Bernard dog of modern breed, which had been buried there by his owner, an innkeeper.

It is not really necessary to trace back the large family of the herdsman's dogs in the different countries to the old Molossus and through him to the so-called Thibet dog. This latter also is nothing more than the indigenous herdsman's dog of his own particular area. We must not, however, carp at the expression "herdsman's dog" in this connection, for here it is nothing more than an equivalent to "heavy watch dog". Heavy watch dogs for home and farm, as well as for flocks and herds, can generally be described as "herdsman's dogs"; just as the "shepherd dogs" in olden times were, and still are, the lighter watch dogs for the farm, besides discharging their regular functions with the flocks and herds.

Doubtless it would be more correct, for the sake of clearness, to name both dog families, not after their chief purpose, as is generally done, but to speak of them as the "large" and the "medium" stock, adding the moorland dog as the "small" stock. We can say "stock" or "ancestral dogs", because all our present-day domestic dog races

have sprung from one of these three forms: the Spitz and "pincher-like" dogs from the small stock; our present shepherd dogs and hunting dogs from the medium; and the so-called herdsman's dogs, as well as the other large forms, (including the Northern dogs and the dogs of the dogs of the Leineri descendants), from the large type. Unfortunately the other names have become so commonly used that for the present, at least, we must tolerate them and use them here. We must only maintain that these racial distinctions can never be implied from these make-shift names; because, as we shall see, the one and the same dog may, in one place, do duty as protector and herdsman's dog, while in another, he is employed as driving dog, and elsewhere as a tending dog.



Fig. 27. Mongolian herdsman's dog, from the border mountains of North China.

We know in general very little, unfortunately, about the Thibet dog. A fairly large number of these dogs were in the Berlin Zoo about ten years ago. They resembled, in all exterior features, size, hair, colour, and expression, the cross-breeds between the thick smooth haired dogs and the so-called old German i. e. shaggy-haired shepherd dogs, as they might be seen about twenty or thirty years ago in large numbers, guarding the flocks in Wurtemberg and Swabia. The Thibet dog, however, which was brought back by Lieut. Filchner from his expedition in Thibet is a sharper edition of the race in general, which might be the result of high breeding in his locality. Perhaps the first named were the general country stock from which an especially noble

stock had been bred; in which event they might possibly bear the same relation to the other country dogs, "the pariahs"; as the herdsman's dog do the shepherd dogs. I would at this juncture refer the reader to the two pictures of these dogs (Nos. 4 & 5). I am indebted to Frau Kloevekorn of Hanover for the picture of a Mongolian herdsman's dog from the North Chinese border mountains, who, from his exterior is the living image of the herdsman's dog and who is also distinctly related to the Thibet dogs. It is comparatively hard to draw conclusions from pictures; the pictures of the Thibet dog and of the Chinese gentleman, however, afford a very good illustration of what I have just said about the country stock of these dogs and our former Wurtemberg herdsman's dog. I should also like the reader to compare the pictures of an Istrian shepherd dog, (No. 46 & 47), which will be given further on, in this connection. The "pariah", on the other hand, shows great similarity in build and expression to our large straight haired shepherd dogs before they were quite fully developed in their breeding. Studer, however, includes Thibet dogs and pariahs in the Southern domestic species which he would like to trace back to a dingo-like wild ancestor. But the small wolf species to which Studer traces back the C. Poutiatini were also dingo-like, and, accordingly, most of the Northern domestic dogs as well. Perhaps we shall succeed in discovering an original common form of a dingo-like miniature wolf, as the ancestor of all the domestic dogs of the old world, except of the moorland dog stock. After the moorland dog had been tamed and domesticated at different places from the C. fam. Mikii, the same process repeated itself with regard to this dingo-like miniature wolf in many different places, if not everywhere, where primeval human tribes, ready for the domestication of the dog, had settled, and that too, at different periods. From that common trunk, the C. Poutiatini, or a tamed dog, very similar to him, was evolved, and from him came, with later infusions of wolf blood, or crossings with a similar wild dog, also with moorland dog blood, or at last in pure breed (shepherd dogs!!!), the other parent races of our present domestic dogs.

Unfortunately all I have said in the preceding pages about herdsman's dogs and shepherd dogs and their close relation in spite of their distinct origin is, up to the present, only conjecture. The final proof, which only skull examination and comparison could establish, is still lacking. Neither Studer nor Strebler had, up to now, at their disposal any herdsman's dog skulls with the sole exception of an incomplete "Komondor" skull, neither could I discover anything about this matter from other sources. The beautiful "Molossus" skull of Vindonissa vanished into thin air, as we saw. All attempts which I have hitherto made to secure specimens of herdman's dog skulls for Studer from their chief areas of propagation, (Russia, Hungary and the Balkans), met with no success; but Studer found on the skull of a shepherd dog from Wurtemberg the hall mark of the wolf mongrel in a manner altogether unmistakable. This would help to prove my statement; for in the veins of the Wurtemberg

working dogs there still flows a great deal of old Teuton (i. e. herdsman's dog) blood.

My supposition is essentially based on observations which I was able to make of herdsman's dogs and shepherd dogs, and their intermediate forms, their behaviour, their external features, their character as well as their uses in somewhat out of the world countries, as for instance in Hungary and the Balkan States; and also on what I heard about them in reports from similar countries such as the Ukraine, Roumania, Greece, and Asia Minor. It is, however, my conviction that here at least I am on firm ground, for in these countries, very little influenced by the traffic and the strained conditions of existence in the West, the life of the dog in harmony with such surroundings, pursued, unhindered "the even tenour of his way" in a simplicity that was almost patriarchal.

In their exterior features, in body and expression, the large herdsman's dog types of the various countries resemble each other almost to a hair, just as the various local shepherd dog stocks; and between these two again, there are a great many intermediate forms, which are the products of former and actual interbreedings. Racial differences cannot naturally be inferred from variation in carriage of the ears or tail. Variation in hair, smooth, rough and shaggy can be produced and bred in all races. This same naturally holds true with regard to colour, and to the carriage of the tail. Pendulous or semi-drooping ears are, however, a sign of domestication as we have previously explained. With regard to herdsman's dogs who, for the most part, droop their ears — although within the limits of the same stock even, there are some with erect ears and others whose ears had been docked short —, this carriage of the ears may be explained by the supposed cross-breeding with wolves, whereby the previously mentioned consequences followed, or they may be the result of intentional breeding to fit them more fully for fighting whenever attacked.

We shall also find similarities between the herdsman's dogs and the shepherd dogs and their intermediate forms in character as well as in manners. If these latter and the pure herdsman's dogs are often reported to be more savage and aggressive than our own shepherd dogs, the reason for that is only to be found in local conditions, in the manner of keeping and in surroundings. We must not compare the character of these dogs, bred and kept on a lonely farm, or in a remote village, (scarcely ever coming into contact with anyone else except their shepherds, even when on service with the flocks), with our well-groomed dogs in the care of dog-lovers who have licked them into shape. Whoever wishes to become acquainted with the genuine shepherd dog character must explore the countryside near the shepherd's hut.

I found this very character and expression with the herdsman's dogs, just as with the shepherd dogs on the Western front, in Belgium and Northern France, even as in Hungary, in Serbia and in Bulgaria up to the most extreme point in Macedonia. It is the original "canine",

not "curlike" manner of the country dog belonging to clan, home and farm, which is made useful in return for his place as "one of the family", and thus indefatigably performs the duties of a guardian by giving timely warning in case of danger or on the approach of strangers both by bark and bite, sacrificing even his own life in fidelity to his master and his master's possessions. It is part of the nature and habit of the farm watch dog to regard the house, the whole farm and stock, the children and relatives of his master as his own particular property which he protects, and for which he fights, just as the wild bitch will fight for the hole in the ground which contains her pups. On the lone farm, within the village borders, there is his home, and there too his empire, where he will courageously show his teeth to any intruders. When away in what to him, are "foreign parts", this behaviour will change a little; others have rights there, others that might be more powerful, more cruel than he, as he has learnt from many a bitter experience. For that reason, when he is alone, "Discretion is the better part of valour", and when confronted with the "Unknown", he suspiciously looks for cover, unless hunger or love blind him to danger. On the other hand, when his master, or some of his master's property accompanies him, he considers that he carries part of his home with him outside the farm, and will fight for it with all his might and main.

For the heavy watch and protection dog of the settlements, the flocks and the herds, i. e. the herdsman's dog, these racial qualities of the domestic dog were, and still are, absolutely sufficient. I will speak later on of the way in which little by little these dogs, through the driving dogs of the herds, acquired the qualities of present day tending and warding-off shepherd dogs.

The shepherd was only a protector against robbers of the biped, or of the quadruped order. In former times there was more than enough of pasture. There were wood clearings, and the borders and wild land were at the disposal of the shepherds, in large extent. It was not yet necessary to approach fields under cultivation. The flocks and herds as well, in olden times, just as in countries that are still wild, will have been kept generally in mountainous countries containing numerous valleys, — at least they were pastured there, — while the fertile land of the lower plains was reserved for the early attempts at cultivation that were already being made. During the walk to the pasture, and in rounding up, the shepherd with his boys kept the herd together, as one may still see to-day in Hungary, in the Balkans or in Spain, where the shepherds with halloos and cracks of the whip lead their sheep on. The dogs, however, were led and were only released on the approach of danger. When the flock was at rest, the dogs were doubtless placed round the fold, lying on mats of skin, — the old Testament already mentions stone sheepfolds for enclosed flocks, — as one may see to-day in Eastern and Southern Russia.

These herd guardians are described in ancient accounts, framed in almost identical language, in which, however, we cannot help ob-

serving that each of these ancient authors is at the greatest pains to quote his predecessors, and nearly every time has copied their words with a most touching fidelity. The dog-hating Jews say nothing in the Old Testament about herdsman's dogs. The first "Cynological" author, the Greek Xenophon wrote about 400 B. C. in his "cynegiticus", about hunting dogs only, but showed himself a wonderful expert on this subject. It is strange that he describes hunting in ancient Greece and the use of the dogs in almost precisely the same language that I employed after the example of Siber when describing the services of the Batta-Spitz. There is also the old Roman Columella, a native of Spain, who is probably the first to write about the herdsman's dog about 60 A. D. in a book entitled "De Re rustica" where he gives a general survey of Agriculture. He wishes the herdsman's dog to be strong enough to fight the wolf, and swift enough to follow him and snatch from him his prey. According to him, his colour should be white if possible, so that he may be distinguished at all times, but especially at night, from the depredating wolf. On the other hand, the watch dog of the country houses, in his opinion must be quite black because a thief would be the more terrified by a black dog. He describes both dogs as being very large, wolf-like, with powerful bones and a loud bark. From the distinction which he draws between heavy dogs for the farm-yard, and the swifter dogs for service with the sheep and cattle, one might find a hint that he already knew of a lighter form, infused with blood of the dog of the Bronze Age, as well as the heavy watch dog type.

Our own ancestors also required of the herdsman's dog that he should fight beasts of prey. In the 7th century A. D. the old Bavarian and Alemannic Folk-Law exacted a heavy fine for the slaughter of a herdsman's dog ("Canis pastoralis"), who fights the wolf and snatches from him the smaller animals on which he preys, and will run to the rescue from a far distance at the cry of distress, Gaston Phoebus, Comte de Foix, like Columella, describes, about the end of the 14th century, the "Mâtin", the Old-French herdsman's dog. The descriptions of Petrus de Crescentis draw their inspiration from Columella. Petrus was an Italian teacher of Agriculture who lived at the close of the 13th century. His book was translated into German for the first time at Strasburg in Alsace in 1494, and appeared under the title "New Feldt- and Ackerbaw", ("new Field and Furrow Cultivation"). In the following sentences I shall quote what the author says in the seventh chapter of his book entitled "dogs", which is preserved in the German Museum in Nuremberg.

TRACKERS. The shepherd whom we have commissioned to care for the breeding of the goats of the villeins on our demesne shall also be accompanied by dogs and shall take right good care of them. Our daily need lays it upon us that we must first have good trackers that they may hunt up the wolves and track them. All divers kinds of game which appear in the field, but run to the water to swim away, may be pursued and hunted with spaniels and lime-hounds. The

manor and its precincts may be protected and guarded by large and mighty dogs. Such dogs then are to be kept everywhere, at least one or two, and are to be trained. They shall be chained up by day, lying in the yard near the gate towards the left as men come in, to the end that they may give warning to the household when some stranger enters or leaves the yard. They shall also be for a terror to thieves and other knaves and shall go amongst the labourers that come from the field. At night they shall be loosed that they may run about the yard and keep ward over the whole manor, fight the thieves that wish to break into the house and the strange wild animals which prowl at night seeking after their prey, driving them and scattering them away.

Therefore the shepherd shall take right good care of the dogs, tending them and watching them with all care, keeping them clean, sweeping their kennels, taming them and instructing them in obedience, breaking them in, oftentimes easing their collars, and washing them during the day, lest in the time of great heat they become mad. Likewise, they shall make them to lie down in soft and comfortable nests of chaff, when they have worked diligently; sometimes even withholding their food and starving them, to the intent that they be hotter on the game, and therefore swifter. They shall also train them to await with patience the shot of fowling-piece or arquebuse, and to be the more careful and industrious in finding out the covey.

THE FARMER'S THREE DOGS. We enact therefore that every landlord shall always have three divers kinds of dogs in his household. One, which shall be called "the watch dog" or "watch-man", shall watch the manor, against thieves and other rogues; then there shall be "the herdsman's dog", who will strive against the violence and harm that may be wrought by worthless people as well as animals; the third shall be "the hunting dogs", who are not fit for any labour, but contrariwise are a let and hindrance, making the others slothful and unwilling.

Here we shall but make mention and speak concerning the house dogs and the large shepherd's dogs, leaving to one side the "hunting dogs", videlicet, "the dogs of the chase", until in the sixth book, we shall remark briefly about "The Chase".

THE FORM OF THE HOUSE DOG. The dogs which watch the manor shall be of a powerful and right stout build, short rather than long. They shall have heads which are large and thick, seeming all the larger in proportion to their body withal, large jaws and gullet, overhanging lips, short thick neck, large thick haired drooping ears, black fiery eyes, a chest both broad and hairy, front legs mighty and broad, thick hairy paws, short and thick tail, (for such is the sign of great and exceeding strength, even as contrariwise, a long and tapering or thin tail is a mark of exceeding swiftness), large pads and crooked nails, a bark sharp and strong as well as some-what terrifying; for a good bark lulls the thieves and the knaves, while an over terrifying bark startles the inhabitants and the family.

Above all things, however, they shall be watchful and alert, not roaming about far and wide, but learning to be quiet in their home; neither shall they be too swift and impetuous: being quite black withal in order to appear to thieves the more terrifying and monstrous during the day, but invisible to them during the watches of the night.

THE FORM OF THE PASTURE DOG. The sheep dog shall be neither as thickset nor as heavy as the house dog; but he shall have the same strength, courage and swiftness; for he must not only fight and attack, but must pursue the wolf and snatch away from him the prey he was about to carry off, tearing it out of his very jaws. Such a sheep dog must therefore be of long body rather than thick-set, for all such animals are better runners and swifter than the dogs with short and close-knit body. Such sheep dogs shall be quite white in colour, to the end that the shepherd may distinguish them in the night, or towards the dawn, when it may still be dark and gloomy. This sheep dog shall be considered a right good dog, if in other matters he take after the watch dog.“

From the above, it will be easily seen that both dogs, the manor dog, and the shepherd or pasture dog are from the same stock. The broader, thickset, and more clumsy were taken to watch the house, and the slimmer dogs who, thanks to their legs were swifter, were used to watch the flock and herds.

The well-known Conrad von Gesner also, who was a Zoologist in the first half of the sixteenth century, writes in similar language about the “Cattle- and Sheep dog”. We read the following in a new edition of Johann Coler’s “*Oeconomia ruralis et domestica*”, which appeared first at the close of the sixteenth century. “They have brought to us from the island of Thüle (Iceland), and from Norway large fierce dogs whose entire body and tail is covered with nothing but large curly tufts of hair, who are very swift runners, of which kind the shepherds in the Vogtland possess many. One shepherd often has as many as fourteen or fifteen, and they think nothing of gobbling up a whole horse at a sitting”. Coler, (when speaking about the large Norwegian dogs, said to have been imported from England by the Hanseatic merchants), while greatly praising their special services, says that they were used to watch the bales of goods in the open air, which is corroborated by Hohberg when writing in 1701 in his “*Georgica Curiosa*” for, while speaking about the shepherd dog, he merely remarks on the watch service of the herdsman’s dog by the way.

Gaston Phoebus includes in his book also an illustration of the “Mâtin” wearing a collar with spikes as a protection, while the shepherd dog group outside the Magdeburg Cathedral shows clearly the exterior of the large German shepherd dogs. This group illustrates a legend connected with the foundation of the Cathedral and originated in the period between 1208, the year of the laying of the foun-

dation stone, and 1363, the year of the dedication. Both groups represent the same kind of dog. What I said above is corroborated

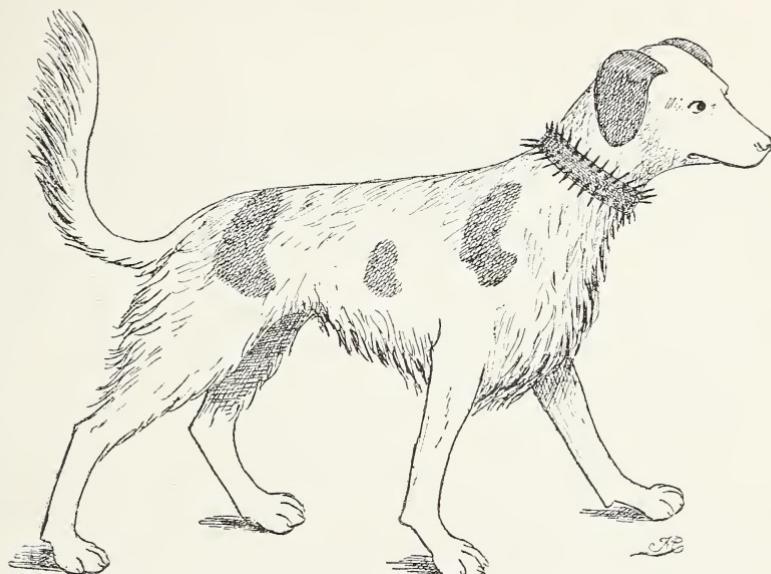


Fig. 28. The "mâtin", or sheep "rude" of Gaston Phoebus.

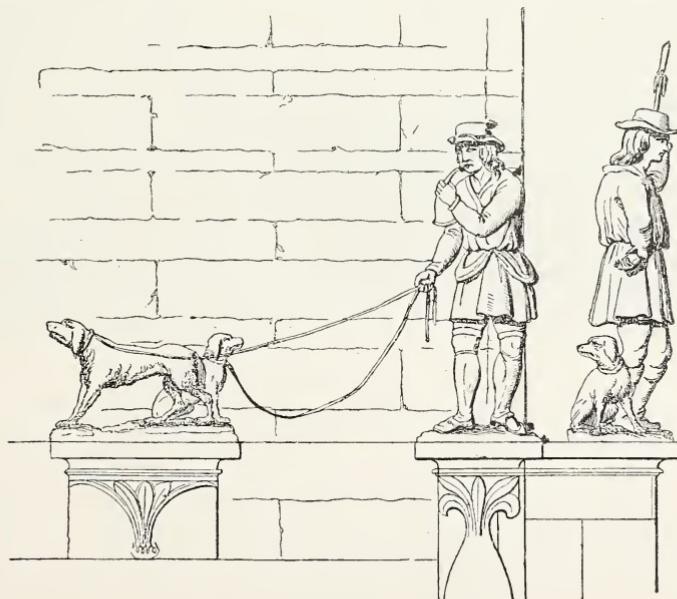


Fig. 29. Pastoral group outside Magdeburg Cathedral,
(about the 14th century).

by the fact that the Magdeburg dogs are represented as being led by a long leash during their work.

Similar herd watchers are shown in an etching in the aforementioned "New Feldt- and Ackerbau" of Petrus de Crescentiis. The picture shows a sheep-fold attacked by wolves; in the foreground are seen three wolf pups, howling and waiting for their gorge. In the



Fig. 30. Sheepfold attacked by wolves:
from Petrus de Crescentiis, "New Feldt- and Ackerbau", Strasburg 1494
(from the Germanisches Museum Nuremberg).

centre of the picture we can observe several wolves tearing to pieces the sheep they have scattered outside the fold. In the background stands the shepherd's cart; the same form that has remained unaltered through the centuries up till now. One of the shepherd's hands has climbed a tree seeking shelter from the beasts of prey; another, leaving his clothes and sword to the wolf, runs for his life towards the neighbouring farm yard; only the dog remains to protect the

flock. He, easily recognisable by his pendulous ears and the broad collar, is pursuing one of the wolves, who is in full flight before the faithful watcher.

Here is an excellent etching made in 1656 by Johannes von der Hecke which gives us a picture of the old German large shepherd dog, which is our own dog. The dog in the picture is shown, — with his coat shorn for work among the sheep during the summer, — but his thick curly hair is unmistakably indicated and easily discerned about the ears.

I have already mentioned that the heavy watch dogs which are included to-day under the name of herdsman's dogs were called even in old times, "Ruden" (large heavy dogs).



Fig. 31. Old German sheep "rude", after a sketch by Johannes von der Hecke, 1656; from the Germanisches Museum in Nuremberg.

I am not in position to say with certainty whether "Rude" comes from "rauh" (rough), or not. In that case, "Rüde" would then mean "the rough one". This derivation would doubtless be very appropriate, because the "Rude" stock is, in nearly every instance, covered with rough hair. The name "Rude" is found in writing for the first time in the "Schwabenspiegel" (Swabian Mirror) of 1281. Hadamar's Hunting Poem of the 13th century speaks of "Ruden to dem Swiene" (dog for swine) as distinct from the "Rude to dem Schaff" (dog for the sheep). Thus the protecting dogs which

accompanied the flocks were called "Sheep dogs" (also field- or cattle dog and sheep poodle), but never "shepherd dogs". This name only appeared later as applied to the tending dog who kept the flocks off the fields under cultivation, when the herdsman developed into the shepherd. Some of these names survive to this day as "Schaf-hund" (sheep dog) in the South, which is more conservative in language, and in "SchafpuDEL" (sheeppoodle) in some districts of North Germany as applied to the shaggy-haired "Old German" dog, of whom we shall hear more later on. In the Romance Languages the respective names for these dogs were "mastino", (Italian), "Mastin", (Spanish), "Mâtin" (French), in which countries they are still applied to heavy watchdogs (cf. too in English, "mastiff").



Fig. 32. Wild boar hunt (by kind permission of the Bibliographisches Institut, Leipzig), from Petrus de Crescentiis "New Feldt- und Ackerbau", Frankfort o./M. 1563.

The "Ruden to dem Swiene" just mentioned were used for the hunting of the wild boar; the "Schaff-ruden" (herdsman's dogs, or large sheep dogs who were so very sharp after wolves and other beasts of prey, and who had very little monetary value), also took a part in the boar- and other hunts. Thus, for example, Landgraf Phillip von Hesse, in the 16th century, ordered that everyone of his subjects who had sheep farms should keep the strong "Rude" fit for boar hunting; if he failed to do so, his sheep farm was to be confiscated. This duty, however, developed itself quite automatically; for the principal task of the herdsman's dog, right from the beginning, was to afford protection from beasts of prey, — is not attack the best form of defence? — and they were finally trained without diffi-

culty to seek and destroy the beasts of prey in their lairs; i. e. they were used for wild hunting.

In the following pages I am showing a series of pictures that give a good idea of the manner of the use of the large shepherd dogs, when hunting in packs after larger game. The first picture of a boar hunt is from a new edition of the book of Petrus de Crescentiis that appeared 100 years later in Frankfort. The shape of the head, the build of the body, the carriage of the ears and tail of the dogs, who are bringing the boar to bay, give an easily recognisable picture of the sheep "Rude" (herdsman's dog). This is made especially clear after comparison with other hunting pictures from the same work, where Great Danes, hounds, and spaniels are represented in the clearest possible manner.

The second picture is copied from an etching by Johann Heinrich Tischbein, a Saxon, who lived from 1742—1808. It represents a hunt with a pack, apparently after a young bison that still lacks the mane of the full-grown animal. The scene of the picture must doubtless be laid in Poland, as the painter was young at the time, when Saxony and Poland were united under one ruler. The dogs depicted hunting are unmistakably strong herdsman's dogs (*schafrudens*) with wiry hair. It was often commanded by strict and brutal masters of the hunt, who were not content with chain and stick, that the tails of these dogs should be docked.

The last picture takes us to the centre of France; showing us a wolf hunt. The picture was painted by Oudry, a French painter of the 17th century, and hangs in the Louvre, Paris. The dog who seizes the wolf from the rear corresponds to the old pictures of the Wurtemberg large hunting "Rude"; he is a crop-haired Great Dane, and the artist painted him yellow, while the other dogs are white. It is difficult to recognise the race of the dog who snaps at the wolf's throat. The two dogs with long matted hair, who attack from the flank, however, are excellent examples of the herdsman's dog, which was found at that time everywhere in Europe. Such large pugnacious watch dogs, as described above, are not met with nowadays in connection with the sheep flocks, nor indeed in the West at all; they are to be found mainly in isolated districts, chiefly on the border lands; but occasionally also here and there, like islands, dogs can be found with similar exterior features, though somewhat smaller in size, among the Old-German, Old-French, Old-English, i. e. shepherd dogs with long matted hair, about whom it is my intention to speak further later on.

The heavy herdsman's dogs are to be found to-day only in the East, the South and in the mountainous countries, where, with the exception of Russia, they are generally no longer used as protection dogs for the herds, but as very reliable watch dogs on farms and on isolated rural settlements. In addition to these genuine "herdsman's dogs" that generally have shaggy hair, but are sometimes smooth haired as well, we find everywhere in these places also our smooth haired "sheep dog" who is the pure racial descendant of the dog of



Fig. 33. *The Chase*, by J. H. Tischbein (from an engraving in the Germanisches Museum at Nuremberg).

the Bronze Age, sometimes as the yard dog, but also in connection with the flocks and herds. As far as I could ascertain, he was not yet the tending dog, in the modern sense of the word, but served only as a watcher and a helper in the driving. There is no doubt that



Fig. 34. A wolf hunt in Central France in the 17th century (after a picture by Oudry in the Louvre, Paris).

everywhere crossings have taken place between the two dog races belonging to the soil; history once more repeats itself to-day and a long line of intermediate kinds has resulted that in the one case resemble the one race in their exterior form, and in other cases, the other. It

will be best to call them "driving dogs", as they probably owe their origin to that very service above all others, and are especially engaged in it to-day.

We are no doubt at liberty to imagine the development of the driving dog as having taken place to meet the increasing desire of the shepherds to keep their flocks together when on the way to the pasture, that is, while being driven; and also, with the idea of sparing themselves on the pastures by training for that service the dogs who ran with the herd. Probably the dogs themselves were responsible for the first ideas which accomplished this result. As the large protecting dogs were rather bulky for this work and were above all a danger to the cattle, and especially to the smaller kinds, on account



Fig. 35. Russian herdsman's dogs, "Aftscharki".

of their ferocity and the seriousness of the wounds inflicted when they bit, the shepherds naturally used, for the purpose of driving, the smaller and swifter dogs of the lighter stock, i. e. shepherd dogs, or the somewhat more powerful cross-breeds between the two kinds. On the whole then, this was a proceeding, originating from a similar set of circumstances, which led to the perfection of our own pure breed of tending and warding off shepherd dogs, or, what is even more probable, it was the actual precedent for this.

The old inherent impulse of the domestic dog to circle round formed the basis for the now developing instinct for driving the herds, which at the present time has reached such high perfection not only in our own tending shepherd dogs, but also in those several intermediate types that were principally employed for driving cattle.

This circling round has taken firm root in the dog's soul: at times of particular exuberance of feeling we may see young dogs run around as though possessed, a sign with them of the highest transports of joy. This child-like play in man and beast is, however, not only an anticipation of the time when play must give place to the sterner calls of life, but it is also a repetition of the racial history in the development of the individual. A greater mental activity, which is the result of acuter senses and the impressions made on them, causes the fullgrown dog to use the accumulated strength of his muscles in his work. How our hypersensitive shepherd dogs and their relatives are ever and always on the go!!!. This instinct to always circle round the herds was now an excellent quality, making them ideal for work with the flocks and herds, because it made it easier for the shepherds to keep their charges together



Fig. 36. Russian herdsman's dog, "Aftscharka".

both on the road and on the pasture. When I give a description of the herdsman's dog types in the East and the South, in the following paragraphs, it will be necessary to speak also at the same time of the intermediate forms of the driving and shepherd dogs of these areas, who share with them their service in yard and field.

Let us begin in the East. The herdsman's dog in Russia is the "Aftscharka". This word means "herdsman's dog", and is derived from the word "Oftschar" (shepherd). The four pictures show the differences among the local stocks of dogs which are scattered about right up into the far interior of Asia. The high-standing variety comes from the steppes of the South; they are to be found in all colours and shades, but are mostly wolf-colour. The pure white are said to be preferred with the herds, though there are sometimes dogs which are all black or white, or white with dark splashes of colour, such as yellow, red, or blue-black hair, but these are much less frequently

met with. Their size is described as varying widely from 20–30" height of back; while pendulous ears are found as well as erect. Their



Fig. 37. Russian herdsman's dog, "Aftscharka".



Fig. 38. Russian herdsman's dog, "Aftscharka".

coat is mostly composed of hard shaggy hair; straight haired dogs are said to be found, especially among the largest forms; while on the other hand, shaggy haired dogs are met with among the smaller smooth

haired species. For the reasons already given, these differences in a country stock, by no means well bred, are not to be wondered at. The Aftscharki are only used as watch dogs in farms and sheep folds



Fig. 39. Polish shepherd dog.

for the purpose of protecting, but never for tending. I could never ascertain whether they assisted in driving, but it was agreed on all sides that they are excellent poachers. Unfortunately I was unable to obtain more detailed information about the smooth haired Russian shepherd dog species, but it was not without interest to note that Russian Officers, called our smooth haired dogs "Aftscharki" as well.

As an intermediate form, we find the so-called Polish shepherd dog, towards the West in Poland and Galicia. He is a smaller shaggy haired fellow, corresponding to our German kind in the East, (Eastern and Western Prussia and Posen), and, like these, is used for tending and driving. Along with this shaggy haired species, smooth haired dogs are also used there for the



Fig. 40. Smooth haired shepherd dog from Poland, in the Grodno district, (from a photograph by the author).



Fig. 41. Smooth haired shepherd dog from Poland, (from a photograph by the Author).

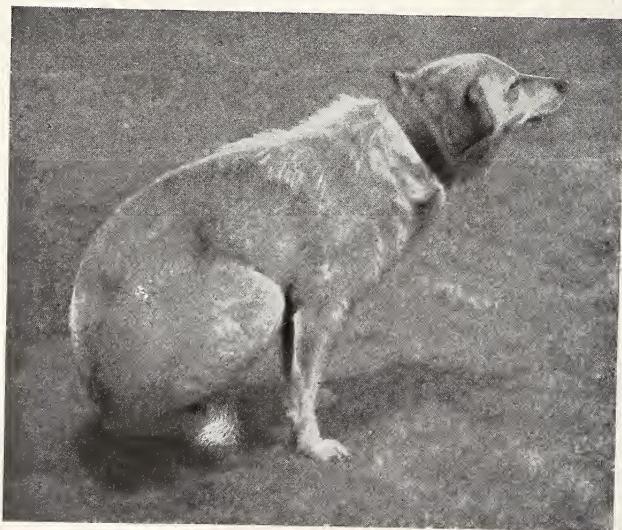


Fig. 42. Smooth haired shepherd dog from Galicia, (from a photograph by the Author).

same purposes. These latter dogs are of a country stock, boorish in exterior, though their good qualities are greatly vaunted. Those whom I saw were small; about 8" in height (resembling our own heath-shepherd dogs), but with strong bones, and coloured either wolf-grey or sandy. The Poles also distinguish between the dogs accompanying the sheep "Pies owczarski" (shepherd dog), and the "Pies pasterski" (herdsman's dog).

In Hungary, we have two forms of the herdsman's dog. The first is called the "Komondor" (plural "Komondorock", with accent on the first syllable). I owe his picture which follows, (as well as that of the Bundas), to Präsidialrat Stefan von Nagy from Buck in



Fig. 43. Hungarian herdsman's dog, Komondor.

Hungary. This longtime expert and breeder of the two Hungarian stocks is of the opinion that the "Komondor" was introduced by the Huns from the South Russian steppes and is therefore an "Aftscharka", with whose long-legged species he exhibits a close similarity. Unfortunately I never saw a Komondor nor a Bundas in Hungary, except on a few picture postcards. Nagy describes him as a mighty fellow with strong bones, standing at least from 28—30" high. The skull bulges out, which leads one to the conclusion that his head line bears a strong resemblance to that of the wolf in its evolution. The pendulous ears are rather long, his coat is long, shaggy and hard, the head has a beard and side-whiskers. His colour is white shading off to peacock-yellow. The Komondor only accompanies the flocks and herds in

exceptional cases, and then as protector. He is, however, an excellent watch dog for the isolated farms.

The second species of the Hungarian herdsman's dog, (in fact already an intermediate form), is the "Kuvasz", which is also called "Bundas"; if very shaggy, it means "the woolly one" from "Bunda", which again means "the fleece". The name "Kuvasz" signifies "mongrel", and points to the fact that that this dog originated from a cross between the imported Komondor and the already existing local country dog, perhaps with an occasional new infusion of wolf's blood. According to Nagy, he should be of the same size as the Komondor, but from what I saw of them, when correctly measured, with the hair pressed down they are far below 28" in height. He should have flat, i. e. a more shepherd dog-like head with small



Fig. 44. Hungarian herdsman's dog, Kuvasz, or Bundas.
(with semi-erect ears due to bad docking.)

semi-pendulous ears. The Kuvasz in the picture had his ears badly docked, which caused them to be semi-erect. The coat should be sleek and something like that of a Newfoundland dog. The colour is generally of a somewhat yellowish white, like the coat of the Polar bear. There are, however, also pale yellow, grey black ("green"), and black shades to be met with. The Kuvasz only goes with herds of all descriptions, in exceptional cases, but he is very much in favour as an excellent watch dog, and is much more numerous than the Komondor. The dogs that up till now have come to Germany under the name of Komondors, and were exhibited as such, were sailing under false colours, for they were really Kuvasz, especially got up for export. Further, I occasionally found the Kuvasz also South of the Danube in Serbia.

In Hungary they only use the "Juhasz kutya" (shepherd dog) also called "Puli", a somewhat and, in the majority of cases, a very small dog for the work with the flocks; he has however pronounced shepherd dog features. The Istrian shepherd dog is heard of in the South Western districts of the former Imperial Dominions on the Danube, and is reported to be found in the same form also in Roumania, and doubtless belongs as well to the intermediate stocks of driving dogs. Like the others, he is met with in the usual colours of the shepherd dog; his coat is smooth-haired and varies in length. The Istrian shepherd dog is of the usual shepherd dog size, about 24" height of back, and with extraordinarily powerful bones; his character is especially commended as being very reliable and faithful. I would invite the reader to compare the picture of the Thibet dog (No. 5) with the picture of the Istrian dog, coming from Roumania, and also to remember what I said on page 53 about this dog and the dog of Molossus.

The Bosnian herdsman's dog as well, shows the same characteristics as the Istrian dog. I have already explained several times that no theory of race distinction can be built up on an observed difference in the coat; as here again in the case of the illustration No. 48, where the Bosnian herdsman's dog has a rather long haired coat, when compared with the shorter coat of the Istrian dog in the preceding pictures.

Dalmatia possesses a shepherd dog form of its own, of medium size (about 22", high), mostly of a rusty coloured yellow and



Fig. 45. Hungarian shepherd dog, Puli; with head shepherd from the district of Tolna Hungary.



Fig. 46. Istrian shepherd dog.

with erect ears, similar to the dogs of Greece and Italy described to me.

In the Durmitor highlands of Montenegro, Captain Kurzammann met with a very powerful dog which he describes as being somewhat similar to the Thibet dog; and in the adjacent parts of Herzegovina, he found somewhat smaller dogs that were apparently cross-breeds between the Durmitor stock and shepherd dogs. No doubt they corresponded to the Bosnian fellow described above (No. 48).

We have now arrived at the Balkan territory, Serbia, Bulgaria, and Macedonia, where for a year and a half, I had an opportunity to observe the dogs thoroughly. I never saw in those parts a large herdsman's dog similar to the Aftscharka or Komondor, but only genuine shepherd dogs, who, especially in the



Fig. 47. Istrian shepherd from Roumania.

South, approximate the exterior appearance of the intermediate forms of the Istrian, Bosnian, and Kuvasz dogs. They were naturally an undeveloped country stock, but yet absolutely corresponding to our own shepherd dogs, before they began to be highly bred. In Northern Serbia, they are mostly of the smaller type, from 20—22" high, but towards the South, they attained a good average size, up to 24" and over. The smaller dogs were often small-boned, but sometimes clumsy and broad in build with a head to match; while the larger variety was generally well-proportioned. In nearly every instance, the dogs, even the heavy ones, exhibit the easy loping gait of the shepherd dogs, and the carriage of the ears varies from complete pendulosity to perfect erection. In several cases, the ears had been docked, and were then erect; the carriage of the tail was mostly good, showing frequently a sideways hook or bend, just

as in the case of our own country stock. One also meets occasionally with a bad "posthorn" (double curled tail), a bobtail of medium length, or the stumpy tail. In the majority of cases the coat is smooth,



Fig. 48. Bosnian herdsman's dog.

sometimes long, occasionally rough, but seldom shaggy. Their colours are of all shades, wolf-grey, red, yellow, brown, black-brown and pure white; or white splashes in conjunction with the other colours as backgrounds are also frequent.



Fig. 49. Shepherd dog from Nish, Serbia, (from a photograph by the Author).

These dogs are principally kept as watch dogs for the farms, and in that service they are very reliable. I am glad to say that they were also well treated, for the Serbians, as well as the Turks, are great animal lovers. I never saw any dogs in North Serbia with the smaller



Fig. 50. Shepherd dog from Nish, Serbia, (from a photograph by the Author).

sheep flocks that were only driven and guarded by the shepherd and his boys. There, sheep are often kept singly and are very useful domestic animals, providing milk, butter, cheese, yoguth (fermented



Fig. 51. Serbian shepherd with dog in the neighbourhood of Nish, (from a photograph by the Author).

milk), and wool for the family. It was generally tethered either on the road in front of the house, or on the plot behind the house in company with "the gintlemin that pays the rint". Farther down South, however, I often saw dogs with the sheep, although I was

never able to observe them at work to tending; on the road they did practically nothing. They were essentially only playmates for the

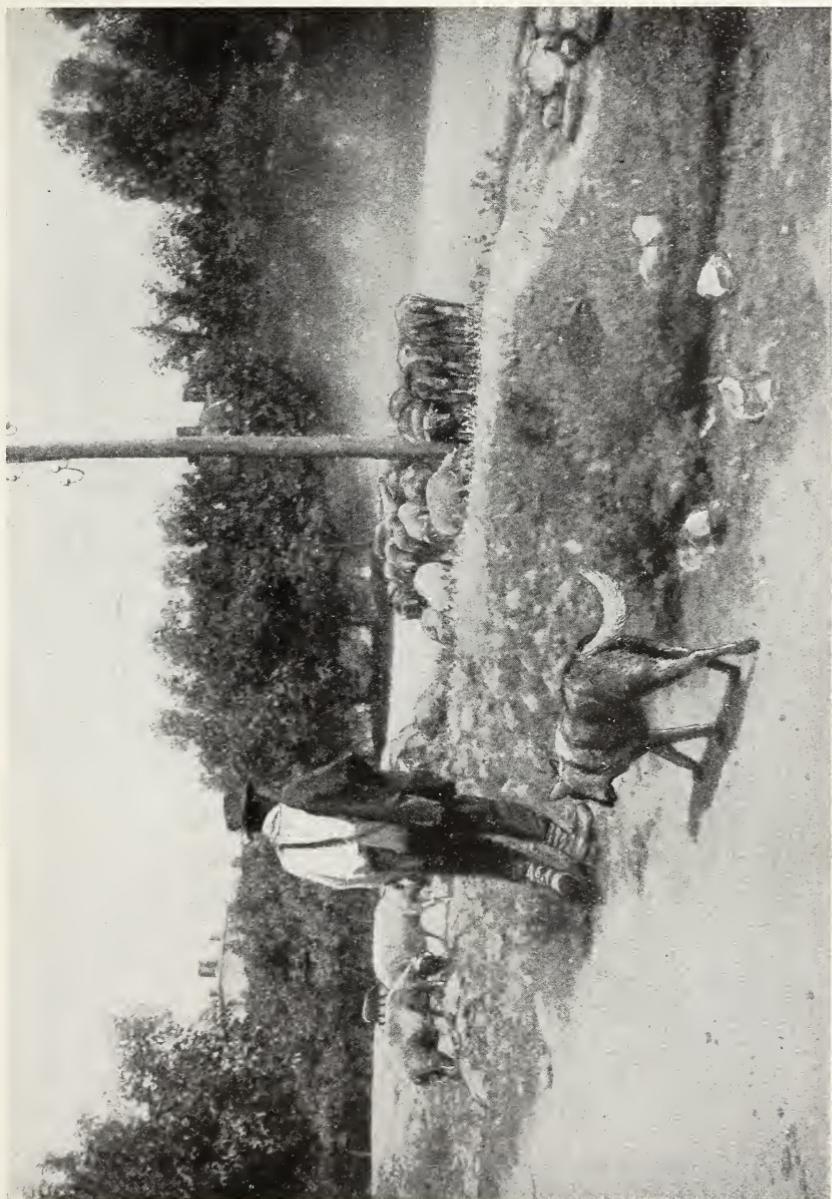


Fig. 52. Serbian shepherd with dog in the neighbourhood of Nish, (from a photograph by the Author).

youthful shepherds. The very name of the dog is sufficient proof that the Serb was well acquainted with the possibilities of the shepherd

dog in this direction, for he distinguished between the "Ovcarski pseto" (shepherd dog), which was also popularly known as the "Ran-



Fig. 53. Shepherd dog from North Macedonia, in the neighbourhood of Uskub, (from a photograph by the Author).

dov", and the "Pasturski pseto" (herdsman's dog) which was used in connection with the cattle. The Bulgarian, however, only uses the name "Tschobansko kutsche" for both shepherd dog and for herdsman's dog.

In Bulgaria where the main live stock is sheep, dogs work with the sheep as well as with the cattle. In South Macedonia, I never saw dogs with small live stock, but very often with the herds of cattle and with Asiatic buffaloes. All the Bulgarian soldier-shepherds who pastured the Army herds, had dogs with them, who, in some cases were quite magnificent specimens, and who, I am sorry to say, were only too clever in evading the wiles of the camera fiend. These dogs were as little in love with work as their masters, for, like them, they preferred to lie in the shade, whenever it was available. The shepherds kept the herds together on the pasture, on the way to water,

Fig. 54. Shepherd dog from Lake Doiran, South Macedonia, (from a photograph by the Author).

and to the resting places provided with salt licks, where they stayed during the night, when the dogs mounted guard.



Many good, powerful and swift dogs, (which corresponded in size to our Wurtemberg country stock), came over with the refugees from the North of Greece to our lines. A gentleman, who had lived in Salonica for a long time, described to me the dogs from that country as being very similar to those of Bulgaria and Macedonia. The reddish-yellowish-flecked "Schneiderschen of Dedeli" on Lake Doiran is said to correspond to the shepherd dogs of Southern Greece and Southern Italy. According to information received from Serbian dog experts, there are particularly large and powerful dogs, very wolf-like, with smooth hair, in the mountain valleys and forests, lying towards Montenegro and Albania. Bulgarian Officers told me that the large herdsman's dog of Northern Bulgaria, which in a former



Fig. 55. Shepherd dog (6 months old), from the neighbourhood of Dedeli, South Macedonia, (from a photograph by the Author).

edition I had called "Sipkapas", did not exist. Shaggy haired dogs were still met with in the country as a whole, just like the straight haired customers, and no larger than these latter. It might, however, be that, in the neighbourhood of the Shipka Pass, a breeding stock from locally limited breeding, had developed and distinguished itself from the average by its more refined exterior. "Pas" is another Bulgarian name for "dog" (like "kutscha" and "pseto"), but has the additional meaning as well of a specially well-bred dog. The "Sipkapas" would then mean "the dog from the Shipka Pass", just as we speak about Thuringian, Wurtemberg, and other local stocks. According to other reports, these Shipka dogs are not genuine shepherd dogs, but very powerful dogs with a cleft upper lip, (like the bull dog)

that had been introduced formerly by German settlers and further developed. They would then apparently be these large "Bullenbisser" (fierce bull dogs), which were seen forty or fifty years ago in our own land. The cleft upper lip, in addition, indicates another alternative origin. If, for instance, those German settlers had come



Fig. 56. Shepherd dog from lake Doiran, South Macedonia.
(from a photograph by the Author.)

from Switzerland, or the South West corner of Germany, they might have brought with them one of the Swiss dairyman's dog species which they had bred on the Shipka Pass, or the "Dürbächler", a large powerful dog of the Rude species, with whom, in some stocks the divided nostrils occasionally occur and are handed on as an inheritance.



Fig. 57. Shepherd dog from Lake Doiran, South Macedonia.
(from a photograph by the Author.)



Fig. 58. Shepherd dog from Bulgaria. (from a photograph
by the Author.)

Crossing the Straits from the Balkan States to Asia Minor, we come to the real home of the Molossus dog. We find in the moun-

Fig. 59. Macedonian refugees from lake Doiran with shepherd dog (from a photograph by the Author).



tains of Khurdistan and Persia, towards the plains of Mesopotamia, a powerful, thick haired, heavy stock; an out and out mountain stock

and, as such, superior in bulk to the dogs of the plains. According to Frau Kloevekorn of Hanover, to whom also I am indebted for the



Fig. 60. Herdsman's dog from Khurdistan.

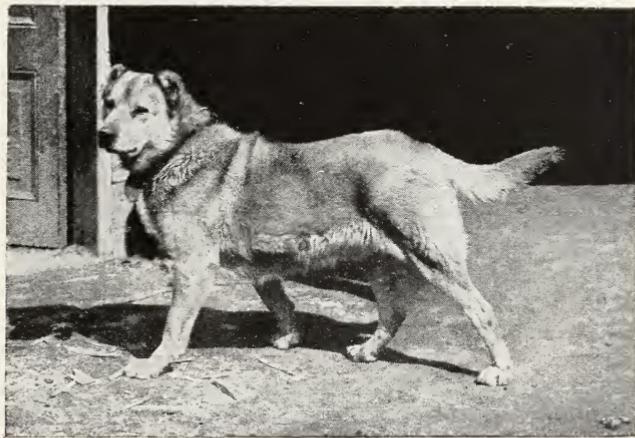


Fig. 61. Tartar herdsman's dog from Transcaucasia.

following picture (No. 60), this dog is generally pure white in colour, and often with a wolf-grey mask. He is a sworn foe of wild animals, and the Khurds use him as herdsman's dog; that is, to guard and protect their herds, and for hunting as well. They dock his ears and tail to about one half of their original length, to make him less vulnerable to attack when fighting wolves.

An illustration published by Pfizenmayer in "Wild und Hund" (Game and the dog) shows the Tartar herdsman's dog from Transcaucasia, who is the very image of the dog just described. He is said to be a little smaller than the Khurd dog, but two of him are reckoned sufficient to keep even a strong bear at a respectful distance from the herd. These dogs serve as herd protectors and watchers throughout the whole district of Caucasia, and right up into far Khurdistan. Here we have obviously before us a representative of the large ancestral



Fig. 62. Italian herdsman's dogs from the Campagna.

form, which (whether they are straight, rough, or shaggy haired), is found in company with a medium form from East to West, and — gradually diminishing in size until they come to the highlands, — everywhere serves the same purpose. The Tartar dogs are said to be wolf-grey in colour, with ears docked very short, and tails shorn from time to time, in order that, when asleep and hiding their head from the cold in their curled-up tail, they may not be hindered from instant hearing. This theory serves as yet another explanation.

In Italy again, we find powerful herdsman's dogs. In the Campagna, they have smooth hair and are pure white in colour, and sometimes, though rarely, their coats have large black or yellowish splashes. Baron von Lassberg in Rome, to whose kindness I am indebted for the following picture, told me that they are only used as protecting dogs and are no longer employed with the herds. The dogs of the Abruzzi, which are probably of the same local stock, are, however, shaggy haired.

A less powerful, intermediate form of dog with a non-descript coat is found in the Province of Bergamo in Northern Italy. This



Fig. 63. Bergamese shepherd dog.

Bergamese shepherd dog frequently accompanies the flocks as driving dog across the Alpine Passes into the Engadine, Switzerland, and



Fig. 64. Dog from the Pyrenees.

the Southern Tyrol. I have already remarked that the pure smooth haired shepherd dog is also represented in Italy.

In Spain the large Rude are called "Mastin". This hulking, hard, smooth haired dog, which is mostly white, or white with black markings, but sometimes also quite black, is used in the highlands only to protect the herds against beasts of prey, though he is often used in boar, wolf and stag hunts. A small shaggy haired intermediate form, very similar to our shaggy haired stock, accompanies the sheep flocks, especially in Catalonia. This dog is called "Perro de Ganado", (dog for small live stock). According to Krichler, the smooth haired shepherd dog from Spain called the "Podenco" is utilised as a



Fig. 65. Large Swiss dairyman's dog.

pointer. According to other reports however, this dog is called "Conejero" (rabbit dog), and is also known as "lebrel". He is used for rabbit hunting, and is found in most farm yards. A particularly powerful stock from the Rude, called the "Pyrenees dog", (on the French side of the frontier "chien de Pyrénées", or "chien de montagnes"), has been bred in the Pyrenees. The animals living in mountainous countries are usually bred to be larger and heavier than in the plains; the very heavy dog species accordingly are found principally in the highlands, while in the plains, lighter and swifter varieties are required. In exterior features, there is a great similarity between these dogs of the Pyrenees, the St. Bernard dogs, and the powerful

herdsman's dogs of the principal Italian mountains. In spite of this, they are not necessarily related, but are doubtless the result of local influence and breeding.

Before the St. Bernard dogs came into vogue and became the victims of a theory of breeding which laid a one-sided emphasis on exterior features, they must certainly have originated from a small and comparatively confined breed. They therefore must have acquired their distinctive features very gradually in their development from their ancestral types and their successors, which were the dairyman's dogs, or more accurately, the largest species of these dogs, the large Swiss dairyman's dog which is the indigenous Swiss herdsman's dog. Professor Heim of Zurich, whom I wish to thank for the following



Fig. 66. Large Swiss dairyman's dog.

pictures, wrote a comprehensive essay, which, unfortunately however, does not go into the question of the origin of these Swiss dairyman's dogs more deeply; for they, like the Balkan dogs, provide much food for reflection. I cannot, accordingly, refrain from going into more detail about them. Skull examination proves beyond all doubt that they are related to the ancestral family of the shepherd- and herdsman's dogs. They appear in four different local stocks quite dissimilar in size, otherwise, they are an exact reproduction of the family type:

The large Swiss dairyman's dog with a shoulder height of 28" more or less, long straight hair.

The Bernese dairyman's dog, or "Dürrbächler", with a shoulder height of 24—26", long straight hair.

Appenzell dairyman's dog, with shoulder height from 20—22", short to smooth hair.

The Endleboden dairyman's dog with shoulder height of 16—18" short haired.

All four stocks have a powerful build with good bones. The Appenzell gentleman appears mostly with a curly tail, and the Endleboden fellow with a stumpy tail. The ears are generally pendulous, small and triangular. The foundation colour is often black and yellow-reddish to red spots, picked out with white. The Appenzeller



Fig. 67. Bernese dairyman's dog.

shows the most white, while the Bernese, instead of a black foundation colour, has sometimes a red or yellow-red shade. They nearly always have wolf's claws, mostly even double spurs, which has a bad effect on the carriage and the gait of the hindquarters. The preceding picture of the Swiss dairyman's dog shows us a mighty Rude stock of which the 1st (No. 65), gives a good idea of a possible evolution into a St. Bernard. The reader is asked to compare with these pictures the Italian Rude stock from the Campagna (No. 62) and also the picture of the Komondor (No. 43). If the skull appears a little wide to denote descent from the dog of the Bronze Age and Inostranzewi blood, you are invited to compare them with the pictures of the Istrian dog (Nos. 46 and 47), always bearing in mind

the fact that such powerful bones invariably have a correspondingly powerful head; and remembering, further, what has been previously said about the variability of the skull of the wolf and his descendants.



Fig. 68. Bernese dairyman's dog.

The Bernese dairyman's dog gives one already the impression of a real shepherd dog type. Anyone acquainted with South German, particularly Wurtemberg dogs, as they are usually employed with

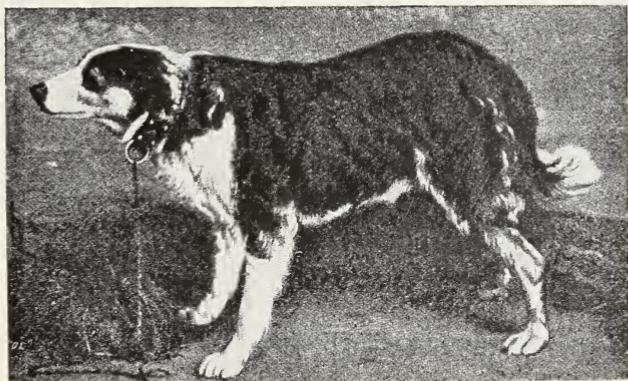


Fig. 69. Bernese dairyman's dog.

the flocks, has certainly seen dogs resembling them in similar circumstances. The colour distinctions, and the tri-coloured coat of the Bernese dogs, which always appears, have nothing to do with the case. It is

the result of local breeding only, just as we meet in Brunswick with similar cases where we have, or had, purely local colour breeds.



Fig. 70. Appenzell dairyman's dog.

Compare also the pictures of the Bernese gentleman (Nos. 67, 68, 69). with the Bosnian fellow (No. 48). The small Appenzell dairyman's dog — the Endelboden dog is his miniature, of whom unfortunately I have no picture —

has also a thorough shepherd dog expression. He reminds one somewhat of the smaller and ruggedly built shepherd dogs of Northern Germany who also often curl their tail. I wish here to emphasise that in using the word "shepherd dog" I always mean the country type, and not those of high breed who are much more harmonious in all their exterior features.

The large dairyman's dog who was formerly diffused over the whole of Switzerland, is but rarely met with to-day. The Endleboden fellow has

Fig. 71. Appenzell dairyman's dog.

always had a limited area of propagation, while the Bernese and Appenzell dogs occur more frequently. As a rule, all of them are in the hands of farmers, dairymen and butchers; their task is to watch the farm and serve with the herds. Professor Heim in writing of them says "many of them, while protecting and guarding, show an intelligence which is quite astonishing, as, for instance, with horses, in guarding the carriage, in their knowledge of the exact boundaries of the property, in the protection of the children and of



Fig. 72. Appenzell dairyman's dog.

the honour of the women and the girls. All of them are born cattle-drivers and seekers for strays. They only need opportunity and example, and no special training. These dogs have lived for generations with butchers, cattle-dealers, dairymen and farmers, where they had opportunity to be exercised in these tasks until the performance of these duties became an instinct". One might write the same about our own shepherd dogs. Professor Heim emphasises this aptitude and clever initiative in dealing with cattle in various

other parts of his essay. The dairyman's dogs then are essentially driving dogs, because in the highlands, cattle are only driven to pasture in the cultivated valleys after harvest and haymaking, but at other times are kept on the heights. Driving on the road to the cattle-markets, or to the pasture, keeping cattle together, and driving them home from the mountain meadows is, therefore, the principal service of these dogs, which already shows a transition to the tending service. When Professor Heim says "when going to the pasture, the shepherd walks first around the borders of the field with his dog, and after this the dog does not allow a single head of cattle to trespass beyond", this is already a beginning of the performance of the warding-off duty, and is quite instructive with regard to this and to the tending instinct.



Fig. 73. Butcher's dog from Rottweil.

On account of their special service on the road, Strebler ranks them with the Istrian dog and their Rottweil relative, and with some other short haired dogs of whom we shall hear later, whom he contrasts, on account of their duties, with the herdsman's and shepherd dogs. At the end of this chapter I shall conclusively prove that such a race distinction is neither necessary nor possible; even as it is impracticable to build up a theory of race distinction on variations of coat, colour, carriage of the ears and other features, as we have already maintained. Because Strebler classes them with the driving dogs, he would also trace them back to a Roman importation, and thence to the Molossus. He says that such Roman driving dogs had come across the Alpine Passes with the herds which followed the armies, and had remained in Switzerland, to the North of that country, on the Rhine, and even in England, where they became the ancestors of the dairyman's dogs, the Rottweilers, and of other races. In my

opinion, we need not go back so far, nor need we appeal to the Mo-lossus monster. It is natural to infer that Italian dogs have come, in the way described, to the North and that they have remained there after the herds had been slaughtered. This process repeats itself even at the present time with the driving and the tending dogs. Bergamese dogs pass across the Alps with sheep flocks, Rottweil dogs accompany Wurtemberg butchers to the Tyrol to fetch cattle; shepherd dogs from Wurtemberg, Upper Bavaria, and even from Hungary went to France with the flocks; and vice versa, French dogs came back with the Wurtemberg shepherds, just as formerly German shepherds went to Hungary and Poland with their dogs.



Fig. 74. Rough haired driving dog from South Germany,
"Münchner" or "Riesenschnauzer".

New race formations, however, do not occur in consequence of such solitary instances; not even if they occur frequently. The alien blood, if it ever were such, would be absorbed by the blood of the indigenous race with which it mixed. In the case in point, there is no question at all of alien blood, but of very near relatives. The shepherd dog with his nearest relatives, the driving and the herdsman's dog is by no means an international dog, but is everywhere the dog of the country, of one and the same blood, i. e. the Poutiatini descendant with very little, if any, wolf blood.

The Rottweil butcher's dog, with short smooth hair, generally black and tan, with a shoulder height of 22—24", is a closely-knit, powerful dog, who, according to his skull proportions, undoubtedly

belongs to the shepherd and Rude stock. The land of his origin, as his name tells us, is Wurtemberg, and from here he has doubtless spread towards the East and the North. According to Strebler, he is replaced in the lower Rhine district by the Rhenish "Stüpp", though unfortunately I have never seen such a dog there, though I was stationed for more than ten years in the Rhine Provinces at the end of the last century, and was always a dog-lover and observer. He cannot, then, have been found so frequently, which must also be said of the Rottweiler and the other remnants of the Rude class.

One of the dogs which essentially belongs to the rough haired intermediate form of the driving dogs is the so-called "Münchener" or "Riesenschnauzer" which comes from Swabia, Upper Bavaria, and chiefly from the district of Munich. Such a name is misleading,



Fig. 75. Driving dog from Flanders, "Bouvier des Flandres".

because the dog has nothing to do with the short and stocky pinchers or snappers who are descendants from the moorland dog, and with whom this up-standing well-built dog, with a shoulder height of about 25" has nothing in common. He belongs to the Poutiatini strain, as is proved by his characteristics. He works to-day as a cattle and driving dog, and lives most frequently with butchers and cattle in stock-yards and in breweries (which are found in the country also in connection with farming), where the people in these Upper Bavarian towns prefer to employ oxen to draw their vehicles. Once in a moment of weakness I called him a "beer-snapper", not on account of his connection with the breweries, but because the stupid Munich dealers and "cynologues", (whom I wish to rap over the knuckles), formerly used to offer this dog for sale as a dog of foreign

origin, as a Russian or Siberian snapper, or even a bear snapper. Such a nickname is not applicable to him, but to the stupid variety patronized by the Munich breeder, who allowed a good indigenous dog to go to ruin in favour of all sorts of alien trash. On account of this misleading name, the dog has recently been crossed with snapper stock, which has made for the improvement neither of his expression nor of his body; still, good representatives of the species

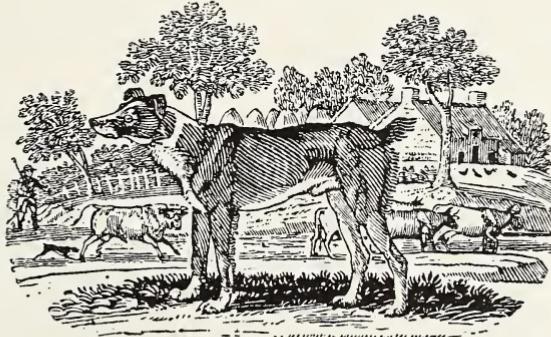


Fig. 76. English driving dog, "Cur-Dog", after Bewick.

show the unmistakable shepherd dog characteristics. The rough hair on the head and the traces of whiskers make the head and muzzle appear somewhat fuller and broader, as indeed is the case with all rough haired stock.

A rough haired driving dog species, quite similar to his South German relative is found in the North West. The driving dog of Flanders, called "Le Bouvier de Flandres", is found in Belgium and

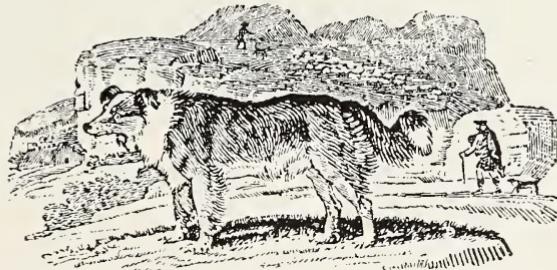


Fig. 77. English driving dog, "Bau-dog", after Bewick.

Northern France, especially on the border land. He is a "croquemort", like the preceding dog, perhaps a little smaller in his dimensions, but similar in colour, i. e. wolf-colour and black. On the banks of the Yser, they breed, as a special sub-species, "Le Bouvier de Roulers", and in the district of Liége we find the driving dog of the Ardennes, whose "living spit" is found throughout Rhineland and Westphalia. All these dogs formerly served essentially for cattle

driving and for the flocks, until the increasing railway traffic made them superfluous. In my opinion, no radical difference exists between this Belgian Flanders dog and the French driving dog "Toucheur de Boeufs", whom unfortunately I never saw, neither during the war, nor on my former visits to France. In England, finally, we find, according to Strebler, two driving dogs who are very similar to each other, and who, in exterior features, belong entirely to the shepherd dog family. They are two collie-like dogs, and are called the "cur" and the "ban" dog; the name of the first is said to be from "Köter" (cur), and the latter "Kettenhund" (chain dog).



Fig. 78. Shaggy haired German shepherd dog, so-called Old-German, from South Germany. Russ von der Krone, SZ 241.

If Bewick connects the larger and more powerful dog with the large dog species of the mastiff, this would indicate that we ought to recognise in him the latest descendant of the large English herdsman's dog; while the smaller cur dog would be the intermediate form on the way to the indigenous shepherd dog stock, who in our days finds its culmination in the Scotch gentleman.

The name "mastiff" indicates by its derivation that the dog which bears the name at present must have been bred from the former indigenous herdsman's dog stock. As the dog of the Bronze Age was diffused in Ireland in prehistoric times, we need not look to Iceland for the ancestor of the English shepherd dog. We will find

further on that England has, to-day also, a shaggy-haired representative of this kind, although it must be admitted, in a very miniature size. In Germany too, up to a few centuries ago, they principally used a dog belonging to the species of the large herdsman's dog stock for service with the cattle, as we have already seen. At first, this dog was used as a protector, and afterwards, no doubt, was crossed with his smaller country cousin, the shepherd dog, for driving purposes. Shepherds and peasants, being conservative people, did not immediately dismiss their old trusty comrade, but tried to train him to assist them in guarding, as well as in his former service on the road, until altered conditions forced them to adopt dogs whose principal duty was to tend and ward off their charges from the fruit on the road, and on the pasture. Thus it happens that even to-day we find in many countries, (especially in the border districts Eastwards and towards the Alps), shaggy haired dogs, as well as the large number of pure bred smooth haired shepherd dogs, in the service of the flocks. There are the so-called Old-German shepherd dogs, who, in their exterior, are a smaller edition of the large shaggy haired herdsman's dog, who sometimes, instead of a shaggy coat, wear the original covering of rough hair.

The largest of these Old-German families is found in Southern Germany especially in Wurtemberg, Swabia, and Upper Bavaria; he has a shoulder height of more than 24", and occurs in all the usual shepherd dog colours, from black through wolf-colour to sandy colour; but I never saw in these parts a white coat, or a patchy coat. The shepherds there call them "sheep dogs" or "Old-German dogs" to distinguish them from the smooth haired shepherd dog or wolf-dog, as they call the wolf-coloured kind.



Fig. 79. Shaggy haired German shepherd dog, from the Imperial Estates, Kadinien, East Prussia.



Fig. 80. Shaggy haired German shepherd dog from Brunswick.

In Eastern and Western Prussia, the Polish shaggy haired fellows are replaced by their East Prussian brothers; a similar stock



Fig. 81. Shaggy haired German shepherd dog, so-called sheep-poodle, from Munsterland, Westphalia.

which is also large and often white in colour. These shaggy haired dogs are diffused throughout Pomerania, Posen, Brandenburg,



Fig. 82. Shaggy haired German shepherd dog, so-called sheep-poodle, from Munsterland, Westphalia.

Brunswick and Hanover as far as Westphalia. They are met with only here and there, and more as watch dogs on the farms, (where they are held in great favour as non-poachers and very reliable watchers), than with the cattle. Their other names "yard dog", "peasants dog" and "peasants' cur" indicate that these shaggy haired fellows also performed yard service as well as their work with the flocks and herds. These shaggy haired dogs diminish in size as one goes towards the West, till in Hanover and Westphalia they are only 20" shoulder height, more or less, which consequently gives them a poodle-like effect. They are therefore not called "shepherd dogs", or "herdsman's dogs", but "sheep poodles". This similarity to the poodle is not very surprising if one remembers that the fancy

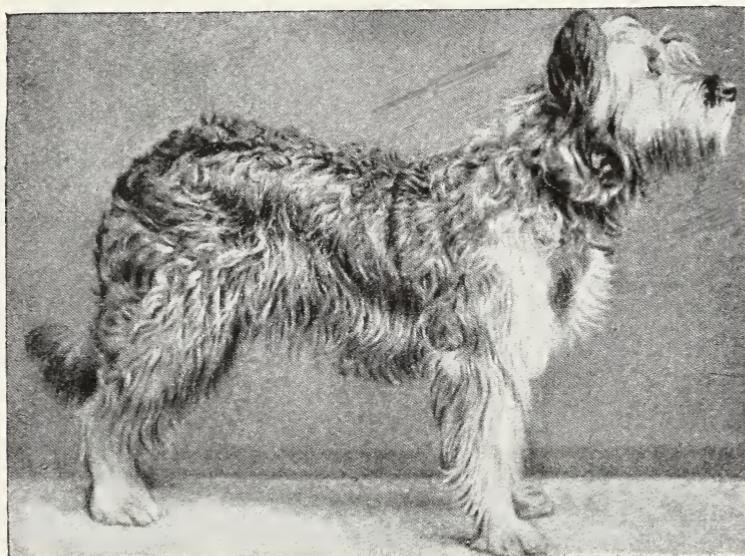


Fig. 83. Shaggy haired French shepherd dog, Chien de Brie.

poodles of the present day originated about 400—500 years ago from the herdsman's dog. This is very easily observed in the country poodle, which is not highly bred, and bears an astonishing resemblance to the small herdsman's dog. According to Streb, the Brunswick shaggy haired dogs have been introduced there by the sheep-masters from Poland, together with the Negretti sheep. This may be the case with some, but I wish to recall what I mentioned previously about the free intercourse of the herdsman's dogs, who were already found in these parts as an indigenous stock. According to Fleming, however, who wrote at the beginning of the 18th century, the shaggy haired dogs were introduced from the North, especially from Iceland. I do not know to what extent he bases his assertions on old Coler, but at anyrate we have once more an instance of that miserable German penchant

to adore "alien lands", which has a great deal to do with the case; for the Iceland dogs have only a fair medium size, about 16" shoulder height. According to other opinions, the Brunswick shaggy

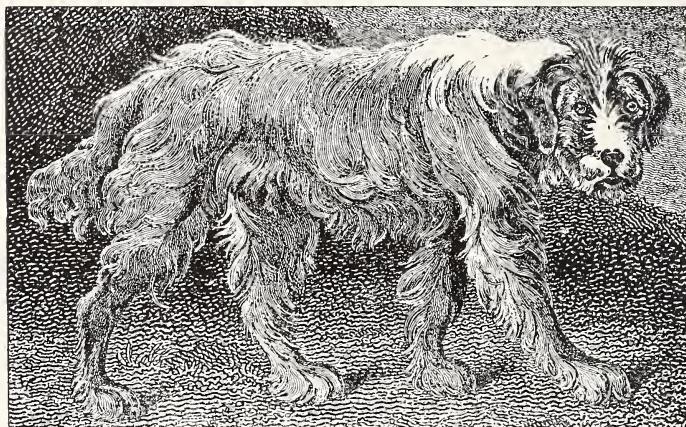


Fig. 84. Old English sheep dog, from the year 1831.

haired dogs, many of whom have stumpy tails, are said to have originated from the Old-English sheep dogs, which English Officers



Fig. 85. Old English sheep dog or Bobtail of the Sporting breed.

of the old Hanoverian Legion are supposed to have brought with them after their disbandment about 100 years ago. This also may be true in certain cases, but why always go abroad when the good

Genealogical Tree of the Shepherd- and Herdsman's dog.

“Warding off” and Protecting dogs

Driving dogs

Guarding dogs

Intermediate forms

Shepherd dogs
(smooth-haired)
in Germany and
in Western coun-
tries

Old-Shepherd dogs
(rough haired) in
Germany and in
Western countries

Shepherd dogs of
the North,
(Elk-hounds?) East
and South. (Russia,
Asia Minor, district
of the Danube, Bal-
kans, Italy, Spain,
[Hunting])

Dairyman's dogs, Rottweilers,
Münchters, Schnauzers,
Bouviers
and other forms between
Shepherd and Herds-
man's dogs in the East
and the South, in Germany
and in Western countries

Herdsman's dogs
in the East and
South (Russia,
Asia Minor, dis-
trict of the Da-
nube, Balkans,
Italy, Spain).
Large, dairy-
man's dog

Hovawart

Dog of the
Bronze Age (C. f.
matri optimae)

Herdsman's
dogs and “Rude”

*Canis f. Inostran-
zewi Anutschin*

Canis Poutiatini

Wolf of medium
size

Wolf
(*Canis Lupus*)

present day ↑

Ancient → more recent ←

Pre-historic Times ↓

indigenous country stock of Northern Germany was already there, and even had to the West of the Elbe a great many stumpy-tailed representatives?

Our Old-German fellow is replaced in France and particularly in the North by the shaggy haired shepherd dog of the "Conté de Brie", the "chien de Brie", or "Briard", whose average size is said to be about 1'11 $\frac{1}{2}$ ", though smaller dogs seem to be the rule. Their coat is not generally uniform; one meets. (besides the pure shaggy-haired variety, which are usually larger dogs), dogs whose coat approximated the rough haired variety. The colours are the usual ones, their ears are generally docked, and are therefore erect. In Southern France, this bumpkin is popularly known as "Labrit", which might be derived from the town of Brie, but he is also known as "Farou" (Tousle-head).

England has its pure shaggy haired breed, the Old-English sheep dog or Bobtail, which is used especially in Suffolk, and in the South West as well. His relation to the Continental shaggy haired stock is thus established. In dimensions the Bobtail corresponds to the other smaller shaggy haired varieties of the West, where too he is often whelped without a tail, or where it is docked. His gait is characteristically mincing, his colour is dark-bluish to light grey, or dove-grey mixed with white. Graf Bylandt in his work "Unsere Hundrasse" (our dog-races), which is nothing but a compilation in four languages of the racial features, with some very vague statements about Breeding Societies, mentions Bobtails with long tails as a special breed, which are also called "Highland" or "Bearded collies". According to the statements made, this dog resembles the small Old-German Wurtemberg type.

*I have endeavoured to give in the Genealogical Tree on the opposite page an explanation of those which up till now have been described as "shepherd dogs" and "herdsman's dogs", of their ancestry and their utility. To put it briefly: — Along with the dogs of the pure Poutiatini-dog of the Bronze Age family, which spread, in its wanderings, over the whole of Europe and the adjacent districts, were light-built dogs who served for watching with the flocks and herds, and for hunting as well. These have become "shepherd dogs" ("schäferhunde") in their posterity, both in Germany and in the countries to the West, where they have also been used as protecting dogs and for the purpose of keeping the animals and the cattle away from the crops. There appeared too in prehistoric times, and in a somewhat similar area of propagation, a larger and more powerful dog of very near relationship, who from the beginning performed the duties of protecting and watching: and, in view of his activities with the sheep and cattle, took over the work of the dog of the Bronze Age. This dog had the strain of the *Canis fam. Inostranzi Anutschin* mixed with Poutiatini-dog of the Bronze Age strain. His descendants exist to-day under the name of "herdsman's dogs" in the East and in the South, especially in the high mountainous districts. Frequent crossings between the two races have been proved to have taken place: from which numerous and especially local breeds have taken their origin.*

These became, whenever they have been used for service with the sheep and cattle, (as was generally the case, just like the genuine "schäferhunde" in countries less effected by traffic and in less cultivated countries), driving dogs, but partly evolved themselves already into dogs that took charge of the flocks and herds and kept them away from the crops.

With the exception of their different sizes and resultant difference in the power of the bones, these dogs resemble each other in build and expression throughout. When they have shaggy or rough hair, the expression has acquired a difference which is more apparent than real, to this extent that the head is seen to be fuller and heavier and the muzzle to be wider and stronger. The herdsman's dogs and their progeny show differences which are mostly seen in a larger body build; namely in a higher stand of the hindquarters. This is due, in cases where they are shaggy haired, to an optical delusion, and next, to a coat which has been fully developed by breeding, and which produces this effect; but this bears no essential relation to the skeleton. Where this also does occur along with the other, this can be accounted for by the manner of keeping and the breeding of these dogs. They were bred, with a special eye to strength and size, to be heavy protecting and watch dogs. This resulted in greater breadth behind and in the chest, but through this they have lost the power to sustain a good and enduring trot, of which they were not in such vital need when only employed as watch dogs. On the other hand, the ability to spring powerfully on to an enemy was necessary, also the power to maintain at times a short pursuit at a smart gallop. Both these features were secured through a strong development of the hind-quarters, whose taking-off and forward motions, through the slightly arched back, are powerfully transmitted to the front part of the body.

With the intermediate forms and the smaller shaggy haired kinds of to-day, and generally too with the pure bred shepherd dogs, there is not infrequently found the tendency to curl the tail, or to have a stumpy, or natural "clay-pipe" tail. This curling of the tail appears to be the result of domestication, and is found most frequently in the descendants of the moorland dog, and also in the smaller Northern varieties of the Inostranzewi branch. According to Strelbel, the tendency to curl the tail is due to the loss of a part of the bony structure, which has resulted in a complete stunting of the tail. In addition, the artificial docking of the tail was practised at a very early date. Perhaps it was already done by the primitive breeder in an attempt to take away from the dog a taste for hunting, by depriving him of his rudder, (see also the remarks on the dogs of Khurdistan). Later on, it was a condition laid down by many hunting laws that the ordinance with reference to the docking and the shortening of the tail was always to be observed in the case of the cattle- and of the peasants' dogs. These same Laws also prescribed that, for the protection of the game, shepherds, dogs, and their charges were to keep away from the forest as far as possible. Where it was not feasible, it was ordained that the dogs who worked with the sheep

and cattle were to be continually led on the chain, and were only to be loosed to fight and attack wild beasts. This order was still in force after the Thirty Years War in the Electorate of Saxony; and is still not abrogated in a part of Transylvania in the Carpathians. Furthermore, the tails of these dogs were not docked from any merely playful ideas of beautifying, but for the purpose of equalising them and of distinguishing them better from the other races. The idea of a gradual tendency to transmit this docked tail by way of inheritance is not therefore to be entirely rejected. As the tail, which is carried stretched out when running, serves as a rudder and enables the dog to make short turns and change direction quickly, dogs without a tail are less fit for tending the sheep, which requires considerable aptitude for turning.

The herdsman's dog stocks are, as a rule, shaggy haired and some of the intermediate forms have the same coat or one of rough hair. There is no doubt that the original form of these dogs at the beginning had wild-dog hair, i. e. smooth coats. We do not know when or why the change in the coat occurred. We can only assume that domestication with its secure conditions, as compared with the existence of the wild dog, has produced a liability to change in the coat of smooth hair, which was especially suitable for the life of a wild dog. This same tendency continued to operate until all the different kinds of hair possible to our present day dogs were able to be evolved from the original smooth hair. Cold or damp in the air cannot, by themselves, account for the change in the coat, because neither exercise any influence on the natural covering of the kind which is at liberty. The coat becomes longer and denser at certain times, but the essential form of the single hair does not vary. Hair "mends", (we shall see what this means in the 3rd. Chapter), i. e. the differences that incidentally occur may therefore be retained consciously or unconsciously by breeding and be made to develop quickly in a certain direction. Shaggy hair is elongated rough hair, and the latter again originated from smooth hair. Perhaps the elongation of the single hairs of the over-coat when it first appeared has taken place at the expense of its density, and Nature has attempted to secure a substitute for this loss, by making the down thicker, and especially by growing a stronger and harder outer hair covering. Later on, no doubt, the science of breeding has led to a suitable selection to secure the development and the permanency of shaggy hair in an attempt not only to distinguish the large dogs that serve as a protection against animal and human robbers, from their natural adversaries, but also to make them appear more powerful and terrible still, besides affording them a stronger grip. We have already said that breeding took place at an early date with a view to giving the dog a different colour from that of the marauding animal.

Hitherto we have followed our dog as a watcher and protector of the flocks and herds, next as an assistant in driving on the road; we have also seen the result of the union of the two races in the herdsman's dog, and the shepherd dog with their intermediate forms.

We shall now consider the highest degree of perfection of this service, namely the tending which involved principally the warding off of the cattle from the fields under cultivation. The possibility of training the dog for this, which afterwards became a necessity, was only realised when the service of protecting the herds against animal robbers had become a thing of the past, and when the arable land had come under cultivation to such an extent that meadow lands became rare, and it was necessary to keep the crops from harm. This was the case in Germany towards the close of the 17th and at the beginning of the 18th centuries, and only when the consequences of the Thirty Years' War began gradually to disappear. With the commencement of more settled conditions, a feeling of general security increased, beasts of prey were exterminated, or at any rate pushed back towards the border lands into the uninhabitable mountain ranges and the large forests. In order to feed the increasing population, it was necessary to make better use of the ground and to break up new ground as well for cultivation.

Of this band of animal robbers, the bear, with the exception of a few occasional intruders was expelled from Germany at a fairly early date, but he certainly remained on the Eastern frontier for a somewhat long time. In certain districts of Eastern Prussia, even as late as 1750, the schools had to be closed, because the path to the school through wood and heath was too dangerous on account of the number of bears. The lynx too, who even at the end of the 17th century was considered the most formidable of the beasts of prey in Pomerania, and from the close of the Middle Ages onward has completely decreased in numbers in Germany, continued his existence only in the impassible woods. The last lynx in Westphalia ended his nefarious career in 1745, and a few were shot in Thuringia and the Hartz mountains at the end of the 18th century and the commencement of the 19th. He survived the longest in the Alps and in their foot hills, while the last lynx in Germany was bagged in the Bavarian Alps in 1840. An account of the damage of which these sheep robbers were capable is given in a report in which we are told that, in the 18th century, a lynx in the neighbourhood of the High Iffer chased an entire flock of 600 sheep from a high Alpine pasture into a ravine. The lynx made himself a sworn enemy to the shepherd, because he was not satisfied with one catch, but, whenever he could, he lacerated several animals, merely licked up the blood, devoured the choicest morsels and let the remainder lie. We are told that one lynx in one night killed seven or eight sheep, according to other reports 40—50; and as recently as 1840, a lynx in Suntal destroyed over 160 sheep and goats. The wolf was by far the most frequently met with of all the indigenous beasts of prey in Germany. The wolf terror was, even in Central Germany, still strong in the Middle Ages. In the district of the town of Würzburg, in 1271, thirty people were torn to pieces by wolves. The Thirty Years' War, with its attendant devastation, afforded the beasts of prey a ghastly opportunity of increasing. In 1649, the town of Hanover was unable to give its tithe of lambs,

because the wolves had torn them all. As late as 1740, fifty were bagged in their principal rendez-vous on the moorland of Luneburg, and the last wolf in the district of Hanover was shot in 1782. Between 1723—1737 "Wolf-geld" for 3,400 slain wolves was paid out in what was then the State of Prussia. The highest sum was paid in Pomerania, where even in the 19th century systematic wolf hunts were held. To prevent the substitution of dog skulls for wolf's heads, a Government Ordinance of 1848 enacted that the proofs of the slaying of the wolves, (which were necessary for the payment of the "Wolf-geld"), were to be shown to the foresters from that time forth, and not only to the district sheriff, whose main duty was to be the payment of the "Wolf-geld". It is well known that to-day wolves from Russia and from Poland occasionally come far into German territory on the East, especially in the winter; on the Western frontier also they have come from the Argonne, which is the principal resort of wolves in France, and penetrated into Lorraine, and even as far as the Eifel.

It is clear that the preliminary conditions for the new and present day use of the dog with the flocks and herds have not occurred everywhere, and simultaneously. The tending dog developed from and alongside the driving dog, just as, gradually and in different districts, it happened at first between the driving dog and the protecting dog. From this we have an explanation of the fact that in the border districts, where density of population, agriculture, and the extermination of the beasts of prey stood in inverse ratio, the old forms endured the longest. We find to-day, therefore the Old-German shaggy haired dog in the service of the flocks and herds most often in Eastern and Southern Germany, in Wurtemberg and Upper Bavaria right up towards the Alpine chain, until in Northern Germany and further to the West, they have been transferred from cattle service to yard service in increasing numbers, or have entirely disappeared. The largest at anyrate have disappeared, for a large dog eats more than a small dog, and peasants and shepherds, being economical folk, do not unconcernedly feed a large eater, when a smaller dog will preform the same or better service.

Large stock who live in the plains, except those who live in real marshy ground and pasture land, are generally kept in their stalls; they are only let out on to the fields after Harvest and the second mowing, and have no further opportunity for inflicting damage to property; just as on the mountains, the animals used in the mountain woods and pastures are kept on the heights. Large stock therefore only have need of a driving dog to accompany them on the road on the way to the pasture; he leads them in front and keeps them together, seeks out the cattle which are lost or who jump out of the column, and brings them back again; he also knows how to check the obstreperous and to give warning of approaching strangers. Tending, in the strict sense of the word as we understand it to-day, can only therefore be developed with sheep, because the sheep flocks are led out during the whole year, (winter pasturing is still the custom to-day), and, in view of the result of the war, it must be still more utilized.

especially on waste ground, mown plots, on drained fields and roads; in short, on places which are closed in by ground which is under cultivation. The sheep will obviously go after the alluring crops; it is equally obvious that no damage must be caused to the property, also that the shepherd cannot prevent this from occurring by himself. Here too the dog was obliged come to the rescue, and, after protecting the sheep from the beasts of prey from the outside, by a complete reversal of his duties, was now at home detailed and appointed to protect the crops against the sheep.

A heavy and consequently easy-going dog is not fit to defend the crops, this is where a swifter and more restless fellow comes in, who, as the result of his less strongly developed bite, will inflict no serious harm when he seizes and punishes a sly and obstreporous sheep. Against the further use of the herdsman's dogs in this new duty, we can set, not only the disadvantage of size, bulk, and strength of bite, but their coat as well. We noted the fact that these dogs are mostly shaggy haired, and the reason why this kind of hair was first developed by breeding. For the exacting service of the "tending" dog, shaggy hair is less suitable in hot weather than the shorter, but at the same time weather-proof, smooth hair or even rough hair. Shearing helps indeed to overcome this disadvantage — as we saw above in the picture that this had already been grasped as a way out of the difficulty — this, on the other hand, leaves the dog quite exposed to all the hardships of the atmosphere, to sun-burn, cold nights, wind, and rain, and this is not good for a working dog. Even less so is this the case when the dog must rush headlong through nettles and thistles, thorns and fences. To this must be added the blue-bottles and other flies which, of course, are found in large numbers with the flocks and herds, and who prefer to feast on a dog thus shorn, which naturally distracts his attention from the sheep. In wet weather thick lumps of clay will stick to the coat of the shaggy haired dog, and in the winter, they will be replaced by lumps of ice which will be formed. Therefore the tending dog, who takes charge of the sheep, must be a swift, keen-scented, and intelligent animal of good medium size, sturdily built, always on the alert and ready for work, with a coat preferably of smooth or rough hair. The large herdsman's dog does not fulfil most of these requirements. His shaggy coat, with the disadvantages just described, ousts the old shepherd dog more and more from this service with the flocks and herds. He can only be kept where no strict work in a confined area is required.

The tending and warding-off dog was therefore developed with the sheep; there he evolved into the shepherd dog, in the same way that the "armed sheep herder" of olden time has become "the gentle shepherd" of to-day. He who drove out cattle, pigs, even geese, remained herdsman, and his dog remained the watch dog. The transition, as already said, did not come all at once, nor everywhere at the same time. In Germany it began from about two to two and a half centuries ago. In France, the Abbé Rozier speaks for the first time of a keeping dog, or a tending dog, the "chien de Brie" in 1809,

— an Old-French “bon homme” —, adding that the old time “mâtin”, the protecting dog of pure herdsman’s dog stock, was still often pressed into service to help him. Daubenton, the student of Natural History, however, who died in Paris in 1799, already brings forward the picture



Fig. 86. French shepherd, with dog about 150 years ago,
(after Daubenton).

of a French shepherd of the 18th century accompanied by an out and out shepherd dog. In England, Dr. Caius of Cambridge tells us in his book “of English dogges”, published in 1756, that as far back as 1570, a small tending dog had already been introduced. This was

possible in England, which thanks to her insularity, had been preserved untouched by the devastations of the Continental wars, and where, for that very reason, the beasts of prey had been exterminated earlier. In Germany, the transition from the protecting to the tending dog occurred very gradually and by no means at the same time everywhere. Thus Freytag, that keen observer and student of his times, tells in his book "Verlorene Handschrift" (Lost Manuscripts), of a shepherd of about eighty years ago that he gathered the scattered flock with his boy after it had been dispersed by a strange dog, while his large "herdsman's dogs" held up the owner of the invader. The very mention of the "boy" is a proof, that at that time, sheep were not generally tended by the shepherd alone with his dog or dogs, but that, as in former times, or as it still occurs to-day in the South and East, the shepherd with his boys performed the "tending" proper.

Whence came then these lighter tending and warding off dogs, the "shepherd dogs" into Germany and the Western countries? The general agreement in form and character of all these dogs, whether they take charge of the flocks in Germany, or in Austria, in Holland, or in Belgium, in France or even in England, indicates that they must be members of one common, widely-diffused race. Skull comparison proves this assertion; the skulls of the just mentioned shepherd dog stocks all exhibit the same hall marks, and all correspond as well to the skull of the shepherd dog ancestor, the dog of the Bronze Age, whose former wide diffusion has been demonstrated and whom we have accompanied from prehistoric times by means of the excavations at Königsfeld and the "turpes" of Holland, right up to the dawn of history. Only the skull of the Scotch collie, and that too of the present day fancy breed, shows some slight variations from the general racial type of the shepherd dog skull, which points to the infusion of alien blood "to beautify the race".

The conclusion is therefore obvious; when our old shepherds looked for a lighter, swifter dog with a less powerful bite, they everywhere tried the one that lay to hand, and who was at their disposal in large numbers, and who was known as the village or farm dog. This dog, no doubt, — here I wish to recall what has already been said about the dogs in the Danube region and the Balkans, — not only served in the farm-yard, but was already used as a driving dog to accompany the flocks. Thus the circle is complete, and the original shepherd dog once more came into his own.

The wanderer has returned, and during the time of his absence there was no epic nor song to sound his praises. "Far from the madding crowd" he had been living as a genuine dog, enjoying at least one half of the possible delights of "sweet liberty", and had remained in village or in country town "where the breeders cease from troubling", secure from the cloying caresses of a blind adoration. He had retained independence and his insatiable power to enjoy life; his qualities had not been developed one-sidedly, but he had consecrated all his mental talents to his service and had developed them to that very degree which we esteem so highly in our present day shepherd dogs.

I have already explained how his natural qualities of watchfulness and of entire and self-sacrificing devotion to his master and his property had been the decisive motive for first using this dog in service with the flocks and herds. I have also explained how, by making use of these two qualities in connection with the natural tendency to circle round, the driving dog has been developed from the former dog who was a protector and no more, and further, I have shown how these new qualities have become fixed. His service makes possible a close formation of the flocks when on the roads, without allowing any breaking from the column or loitering. This was especially important when driving through towns or villages, for in such places, there would always be "a home from home" for wandering and inquisitive sheep, with all the advantages of permanency. Another great feature in the service of the driving dog, which had also developed from the habit of circling round, was the keeping and driving together



Fig. 87. Old-German shaggy haired shepherd dog with the flock.

of the animals grazing on the pastures. There only remained to be added the protection of the cultivated fields adjacent to the roads, and above all, those adjacent to the meadows. The watch dog, roaming round and round the farm and the settlements which he must guard, had formed the habit of withstanding the invader on the border of the area under his protection, and of preventing the stranger from setting foot on his master's property. We may imagine this tendency as having originated from the instinct of the wild dog to protect his home and his food; he will keep away from his lair even his own kindred, and will drive an alien out of his preserves. Now the shepherds knew how to make use of this trait; the land under cultivation became the property to be protected, and the dog was placed to keep the sly and covetous sheep off the crops. I wish to recall what I said previously with regard to Heim's theory about the training of the Alpine dairyman's dog.

Thus far developed, the warding off trait was further evolved till it became an instinctive talent, for the newly-acquired quality became part and parcel of the race by breeding. That this trait which thus originated did not reach the same uniformly high standard everywhere, is explained by the varying local methods of sheep farming and cultivation. It will be developed in the highest degree in the working dog of those countries where agricultural land is completely under cultivation, and where it is planted with the most valuable crops, and where, as a natural consequence, particularly good tending is required from shepherds and dogs. By reason of the fact that every available piece of arable land is under cultivation, the opportunity for pasture till after the harvest is very rare, and damage to the crops is consequently a very serious matter. Such are the general conditions which prevail in the wheat and root districts of Central and Northern Germany.

Hand in hand with the fixing of this warding off instinct went the suppression of the inclination to bark. The watch dog's bark must mean business; the driving and tending dog, however, must be silent in order that he may not disturb the sheep unnecessarily. Only on certain special occasions, about which we shall speak in the second chapter, is the working dog with the flocks and herds required to "speak up", and even then only on the word of command. Our shepherds know how firmly rooted just such vices — as barking and injudicious biting — are, and inherited in not a few stocks; prudent breeders therefore who are intent on producing good and reliable dogs are careful not to infuse their breeds with the blood of stocks in which these vices are transmitted.

Lastly, there still remains the grip, i. e., the seizing and the biting powers of the dog, to be discussed and settled from the breeding point of view. The hunting wild dog sprang on to the victim he had tracked just behind the withers, to tear out the entrails, and that he may have the more secure possession of the animal thus seriously injured; in the event of his prey being small or at rest, he sprang at the nape of the neck or the throat. In the case of the herdsman's dog, this dangerous tendency to grip the flanks must be eradicated, as well as the spring at the throat, and certain of the other vicious grips, such as the grip of the legs, the stomach or the tail, and it was also necessary to moderate indiscriminate snapping. In Southern Germany, they still adhere to the habit of gripping the nape of the neck or the ribs, though the first method has the more advocates. The type of sheep kept there is generally large; and similarly the South German working dog stock is usually larger than that met with in Central and Northern Germany. The large dog is also large enough himself to spring on to the large sheep from above and to grip it by the nape of the neck, but care must be taken that he does not seize the neck on the side of the throat nor at the gullet, nor so that he can nip the sheep's ears. With regard to the grip of the ribs, care must be taken that the dog shall not grip too far behind in those easily damaged withers, where he could injure

both the ewe in lamb and the lamb as well; yet at the same time, he must not grip too far forward in places like the shoulder or the fore-legs. In Central and Northern Germany, where sheep tending of a very high order is required, because the soil is better utilised, and where the sheep produce more valuable wool, as well as better mutton, (the South German shepherds contest this, but it is true nevertheless), the question of the grip has been more fully entered into and made a matter of science. The natural kinds of grip which were able to injure the sheep and its descendants, and also its wool have been repressed. The grip therefore in the haunch and in that part of the hindquarters which is well covered with wool, from one to two handsbreadths above the hocks, is developed.

The qualifications for a dog performing tending service are as we see, numerous and many sided; and a greenhorn with the flock cannot carry them out. *Only one dog could do it, one who for centuries and for cycles has been able to establish a more than physical "rapport" with peasant, herdsman, and cattle, and by this means has acquired "the herding sense", who from his puppyhood was entrusted with cattle, who was set to guard them and to master them. This dog was there, the descendant of the dog of the Bronze Age, which, since the use of the heavy dog, had no more remained the only dog for service with the flocks and herds, but now has become detailed for this special duty again.* We know too where he was in the meantime when he did not run with the flocks and the herds along with the big dogs; he was the yard protector of the later Middle Ages. His name describes the work he performed. He divided the responsibilities of the work of the farmyard with the peasant's cur (the lord of the dung heap), a small quarrelsome offshoot of the moorland dog family, who delights to-day to live, in village or in small town, a dung hill lounger, or who rushes aimlessly and viciously out from the door between one's legs; while the regular yard protector stands ready on guard and gives warning by giving tongue; though he only intervenes, should the seriousness of the situation demand it. The exacting demands which are made on dogs, when used with the flocks and herds, are the best refutation of the silly fairy tales that the warding off sheep dog of about 100 years ago or even more recently, came into existence as the result of having been bred out of wild wolves. Unfortunately, however, one can always hear such drivvel.

From literary remains we gather little knowledge of the yard watcher: he was too much taken for granted to offer any enticement for a special description. Even in isolated country moorland villages or lonely farms, the old watch dog variety is scarcely to be found any longer. With us, time has modified and effaced their memory; the dog too has adapted himself to a higher civilisation and to a more active intercourse and the other conditions of life. While mentioning above the herdsman's dogs, I pictured the yard dog variety according to the impressions I had gained of him when I was in the wild Balkans. There, where it was very easy to understand him, the observer who takes the trouble to examine the phenomenon on its own ground,

can indeed see, even to-day among us, the Hovawart (yard watcher) kind in his primitiveness, appearing in conjunction with the young dogs, who reproduces the family features, in the time when, though they may have lost their cheekiness, they have not yet entered on those years when they have become as "one of the lads".

We know something of the Hovawart from Heinrich Mynsingers' book which appeared in 1473 under the title of "Puoch von den valken, habichten, sperben, pfäriden, und hunden" (book of the falcons, hawks, sparrow-hawks, horses and dogs), which the learned "Doktor in der ertzney" (Dr. of Medicine) compiled before 1450 at the invitation of Graf Ludwig of Wurtemberg. He wrote it, or as he says in his own words "I described it in German, even as the philosopher and Master wrote in Latin". He based his remarks on the pamphlet "de falconibus, asturibus, accipitribus", which was written by Albertus Magnus, who died in 1280; and which again is a supplement to the book of the Hohenstaufen Emperor Frederick II entitled "de arte venandi cum avibus II". Mynsinger mentions five kinds of dogs which were well bred, "the hunting dog and drawing dog, the greyhound, the big yard dog, the "zwy darm" and the lap dog. The large yard watchers, who are mentioned there as "wolf-dogs", are, by the description given, recognised as the unmistakable descendants of the dog of the Bronze Age, our own shepherd dogs, for the shaggy haired pendulous eared sheep Rude bears no resemblance to the wolf. Mynsinger became acquainted with the herdsman's dogs, for he speaks once of the "barking of the dogs which are tending the sheep". He has made no special mention of these dogs, because as already said, he only describes the aristocratic dogs, among which the large Rude could not be reckoned. On the contrary, he thus honours the yard watchers, because they must be treated in the same way as the hunting dogs and the grey hounds, but must have "coarser and leaner food". This exalted position of the yard watcher is most unmistakably largely connected with his use for hunting, as said before. According to Mynsinger, the noteworthy "zwydarm", whose strength and swiftness he specially commends, came from the greyhound and the yard watcher. Mynsinger says nothing about the yard watcher serving with the flocks and herds, on the contrary, he informs us, even as Albertus Magnus, that this dog serves to track out 'the thief and the rogue" and works in just the same way as our man-trained dog of the present. Accordingly, we have the yard watcher or shepherd dog acting as police dog more than 700 years ago.

We do not, however, merely rely on old reports, we have a better means of knowing that the descendants of the dog of the Bronze Age, whose story we have been able to trace right up to the beginning of history, remained unaltered throughout the Middle Ages. These are the discoveries of the bones at the Steinhau Höhle (cave), Teufelskante in the district of Schlüchtern Hesse-Nassau which in this instance belong, not to the prehistoric, but to historic times. This Höhle served as a kind of knacker's pit for the reception of the remains of the carcasses of cattle that died, especially those of dogs.

The preponderance of dog's bones is explained by the fact that in 1540, at a reconstruction of the Castle of Steinau, belonging to the Counts of Hanover, the burying ground of the hunting and yard dogs of the castle, which had been so used since the 13th century, was now employed for other purposes, and the remains of the dogs thus exhumed, had been thrown into the cave. Later on, dogs' carcases had been thrown into the same place as well, and some hungry dogs, attracted by the "bouquet" of the knacker's yard, had penetrated into the deep recess of the cave, whence they could not find their way unaided. According to Hilzheimer, who has thoroughly examined and catalogued them, the greater number of these bones are the skulls of dogs that were used for hunting. He found, moreover, some skulls of the Great Dane family and of some grey-hound-like dogs, also some belonging to the family of the moorland dog, and finally, and these in large numbers, the skulls of dogs who corresponded in every respect to those of the dog of the Bronze Age, and our present day shepherd dogs. All these skulls belonged to a period dating from the beginning of the 13th to the 19th centuries. The numerous specimens of the dog of the Bronze Age shepherd dog skulls are explained by Hilzheimer to show that these dogs had been used as watch dogs by the officials of the castle as well as for hunting purposes. This is more than probable. The old dog of the Bronze Age was formerly, just like the elkhound to-day, the "maid of all work"; he must therefore have been the first hunting assistant as well. Thanks to his acute senses, his perseverance, his swiftness, and his sharpness, and above all, on account of his small market value, he has probably been used later — just like his hulking cousin the herdsman's dog, and perhaps in preference to him — to hunt in packs after the boar, as he does in some countries, as for instance in Hanover and the Eifel to this very day. In the 2nd. Chapter we will show to what extent our shepherd dog is fit for hunting. At all events, the Steinau excavations bridge over the apparent gap, thus proving the continuity of the race in a manner which shows most conclusively that it has existed without interruption from hoary antiquity right up to the present hour.

It is obvious that in the course of time the descendants of the dog of the Bronze Age have not remained free from all kinds of alien infusions, in spite of the fact that, according to Mynzinger's book, the breeding of our yard watchers has not been effected without a certain degree of care. Where they have taken place, these crossings will have been most frequently with their nearest relatives of the other country stock, the herdsman's dogs; but a race which, in the course of centuries and of cycles has remained so stable in its most vital respects, exhibits to such a degree the power of hereditary transmission, that a few drops of alien blood can be absorbed with no danger to the stability of the race. The perhaps unrealised but very natural result was seen in an increasing exhibition of the racial characteristics, when, as a consequence, the new use of the shepherd dog in tending came to be required, for the shepherds began to select

carefully and in accordance with the correct principles for promoting the breed.

Thus the old pictures of shepherd dogs, of which we possess unfortunately only too few, show us an absolutely typical shepherd



Fig. 88. Shepherd dog, from a drawing by Joh. A. Klein, Nuremberg, 1817, (from the Germanisches Museum, in Nuremberg).

dog of the working stock. A very excellent specimen is the shepherd dog drawn by the well known animal artist from Nuremberg, Johann Adam Klein about 1817. It is true that the dog has docked ears, but in South Germany we find them often in the working dogs, and

their pendulous or semi-pendulous ears have become erect through docking.



Fig. 89. Shepherd dog, lithographed from life by Friedrich Simmller, Düsseldorf, 1830—1838.

The picture by Simmller (No. 89) belongs to the period 1830 to 1838, during which time the artist lived in Düsseldorf. The close-

knit sinewy body and the coarse coat of the herdsman's dog are faithfully reproduced, and the hindquarters are excellently delineated. So far as the head is concerned, the artist has blundered to a certain

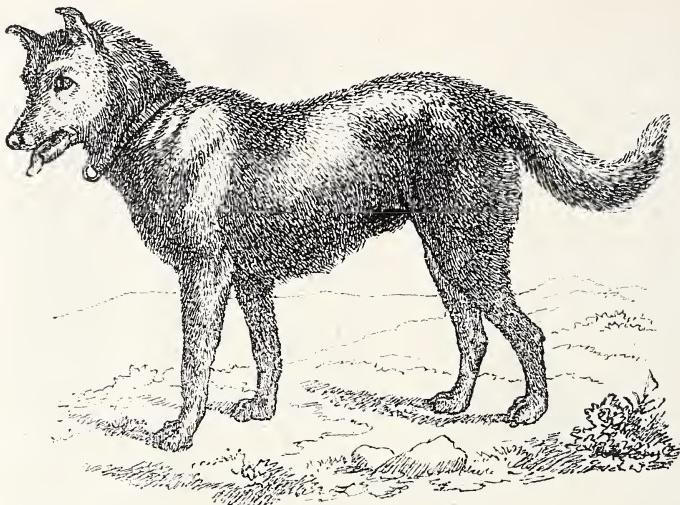


Fig. 90. Shepherd dog from Wetterau, drawn by Friedrich Specht, 1872.

extent. Such a night-cap like overhanging of the ears is impossible. The falling away too of the lines of the forehead almost at right angles to the nose, is much too sharply drawn; which is the result of the eyebrows being too highly drawn.

Lastly, the arrangement of the teeth with two pairs of incisors — reminiscent of the phalanger — is, according to what we know of body build, impossible; likewise the too flat, powerless and receding lower jaw.

The two other pictures, lastly, are by that well known animal painter Friedrich Specht; the drawing of the shepherd dogs from Wetterau appeared in 1872 in the "Gartenlaube", and the picture of the head in 1888 in "Daheim". Although Specht was born in South Germany, he has, notwithstanding, drawn something more like the North German shepherd dog variety; which in the West is called the "shepherd spitz" both by the



Fig. 91. Head of a shepherd dog, drawn by Friedrich Specht, 1888.

shepherds and the peasants. On the other hand Professor A. Braith is the painter of a splendid head of a Wurtemberg working dog, which is full of expression. The pastoral pictures of the Master from Biberach achieved a world-wide reputation about the end of the previous century. The knowing expression of the herding dog is clearly shown in both these pictures.



Fig. 92. Head of a shepherd dog, from a picture by Prof. A. Braith in the Braith-Museum at Biberach on the Rhine.

For the purpose of comparison, I have included a few more photographs of German shepherd dogs from the eighties in the last century. They are pictures of North German working dogs, with which Captain Riechelmann-Dunau and Graf von Hahn, formerly in Wildungen, (the founders of the first Breeder's Society for shepherd dogs, the "Phylax", which came to an end after a short existence, as the result of private disagreement), began their experiments in

breeding. They were the means of bringing "Stoppelhopfer", "Schäfermädchen", and "Trützig" into notice.

These were not absolutely beautiful dogs in the commonly accepted sense of the word. But with shepherd dogs, their standard of beauty is not so much an exterior loveliness as excellence in usefulness, with a body built especially for the work required. "Handsome is as handsome does." If too the dogs in the picture leave something to be desired; an ungainly position in the picture probably gives an appearance of defects which by no means really exist; — it is not so easy to photograph dogs in a favourable position! — we



Fig. 93. Smooth haired shepherd dogs, about 1880, owned by Captain Riechelmann-Dunau.

can, notwithstanding, consider these as the foundations which soon established the high breed to be developed. However it be, these dogs are shepherd dogs, and we can catch the correct expression in them even from these old unflattering photographs.

The gradual ever-increasing advance in the breed towards forming a harmony which was already beginning and inevitable, was, as I have shown, the natural result of the influence of the shepherds which they brought to bear on the breed, and as the consequence of their experience of the requisite qualifications for the work to be done. Many shepherds indeed, especially from the shepherd

clans, were obsessed with the ambition to produce and breed not only good working dogs, but also dogs which were well proportioned outwardly and pleasing to look at. They believed in mixing good strains; they weeded out what was unsuitable and unfit for sheep tending — this was sent for service with the cows, the pigs, and the geese, to the yard as watch dog, or to the peasant's kennel, to the dairies for turning the wheel of the churn, or to similar tasks — and thus, on some estates and large sheep farms, some super-excellent utility dog stocks were developed, which were able to survive the heavy reduction in sheep rearing which set in about the middle of the 18th century. Unfortunately this decrease has wrought considerable harm to our breed of working dogs: large sheep breeding farms were entirely broken up and sheep keeping reduced just in



Fig. 94. Smooth haired German shepherd dog, about 1880
(Stoppelhopfer).

those very districts where the greatest attention had been paid to producing good dogs, and where the most careful tending was demanded. Consequently, about the end of the last century, when a new advance was being made towards the higher breeding of the race, a lack of harmony could be observed in the exterior of our working dogs, similar to that which I have described in word and picture when speaking of the dogs of the Balkans. The same conditions prevail to-day, even in the Western countries in connection with the working dogs, and everywhere in our own country as well, where the ideals of the Societies of the breeders of the race have not been fully understood or followed by the shepherds. We shall speak later on of the principal Societies for the perfection of the breed.

In such an extensive breeding area as the German Empire, it was inevitable that, in the course of time, some local stocks would



Fig. 95. Smooth haired German shepherd dog, about 1880
(Schäfermädchen).

be produced differing externally in minor details, as a consequence of breedings between neighbouring stocks, even as local influences



Fig. 96. Smooth haired German shepherd dog, about 1880 (Trützig).

favoured the production of special varieties; but the exigencies of the service to be rendered were the main factors in producing the breed.



Fig. 97. Unequal work-mates.

One area required lighter, brisker dogs; while another required stronger and more pugnacious animals. We generally find that in the South and in the mountain districts, the emphasis was laid on



Fig. 98. Flock of moorland sheep, from the establishment of Freistatt Varrel, Hanover, with chief shepherd Plasz.

the size of the dog. The mountain varieties possessed, in addition to a tendency to be bear-footed, other individual characteristics, such as a large size. Generally speaking, in such places where beasts

of prey and vagabonds found out their remotest nooks, the biggest dog would live the longest. The stock of sheep kept in any country generally had an important influence on the size of the dog employed in their service. A dog who would be adequate for moorland sheep

and for small merinos with a height of back of about 22", and a live weight of about 30—80 lbs, would have had a very difficult proposition when dealing with heavier country or English sheep with a height of back of 26—32" and 90—140 lbs live weight. Thus we frequently find a dog of lighter build in parts of Central and Northern Germany, where, besides the moorland sheep, other light sheep with fine fleeces are especially kept.

Fig. 99.

Working dog from the heath district.

that a cross-breeding between the descendants of the dog of the Bronze Age and a type of smaller Northern dogs with curly tails of the moorland dog type, or the Inostranzewi stock frequently occurred, as the spitz or Pomeranian dog had there a large area of propagation. This may be gathered from the fact that a tendency to curl the tail, which is seldom met with in the South, occurs quite frequently in the North, just as, particularly in Thuringia, the full-developed head of the dog shows some of the hallmarks of the skull of the spitz or the Laiki type. This idea is conclusively confirmed by the smooth long haired coat, resembling the spitz coat, which is

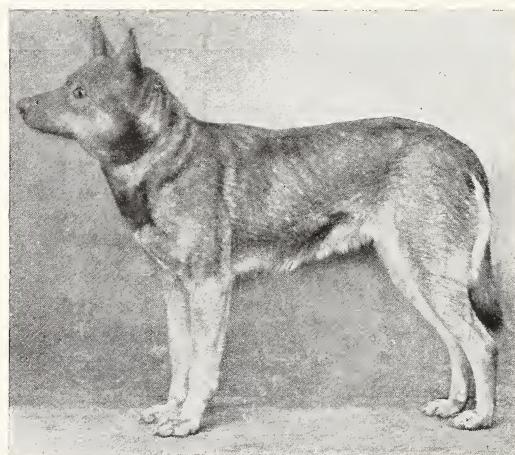


Fig. 100. Smooth haired shepherd dog, Thuringian working variety, at the end of the last century; colour, grey flecked with yellow, yellow points.

frequently met with in Schleswig Holstein, Pomerania, and also in Silesia. On the other hand, the more powerfully built skeleton of the South German dogs, and their tendency to pendulous ears indicate a stronger mixture with the old sheep-Rude stock.

Now the various pictures of working dogs from different countries, shown in these pages, throw light on what has been said. I have added some pictures of rough haired and smooth-haired shepherd dogs in order to show these variations of the foundation form of the smooth hair. The rough hair is rarely ever met with in German districts, — in Holland and Belgium it is the fashionable breed, though not very numerous — I have explained above how it originated. A wavy coat is more often met with, which is attributed to a crossing between shaggy haired and smooth haired dogs, and which sometimes reappears after several generations. In the North, but never



Fig. 101. Smooth haired shepherd dog from Wurtemberg, working variety, at the end of the last century; black with yellow points.

in Southern Germany, one can frequently see working dogs with fairly long smooth haired coats, the under wool of which is generally not well grown. This long smooth hair is sleek, does not curl and forms neither whiskers nor mane; but it never has the hardness of good smooth hair, and is therefore not considered so suitable for the service. The Belgian fancy breeders, as well as the English breeders, have bred a special coated type from dogs with such a coat.

I shall go into the matter of hair and colour more especially in chapters 4 and 5; here I only wish to say that our smooth haired shepherd dogs showed the same colours as the shepherd dogs of other countries. The foundation colour is that of the wolf-like darker

mistiness on a yellow background from which all other colours, from the pure white, (which, however, is very seldom seen in smooth haired dogs, and is even then not beautiful), up to uniform black have been developed. The most frequent are the wolf-coloured, that is to say, the sandy or the sandy grey, or pale red to brown coloured dogs with regular, mostly light tan points on head and limbs; one can also see black and sandy coloured dogs, i. e. black dogs with the same markings, but mostly with more pronounced darker tan to reddish brown colouring. Dapple blue fellows were formerly often met with among the working dogs in Northern and Central Germany, especially



Fig. 102. Smooth haired shepherd dog, Swabian working variety, at the end of the last century; black, yellow points, docked ears.

blue or red with white patches, (such were called bluish grey), or reddish brown dogs with large white splashes. In Brunswick, some sheep farmers have a special liking for dogs with a particular tiger-spotted coat which occurred frequently as well as the other. These dogs had dark brown to black spots or splashes, or larger splashes on a lighter background, or, which was considered much more aristocratic, silver grey splashes on a black ground. Tiger-striped dogs are found more often in the South.

The question could here be very well asked whether the dark coloured or black dogs are as fit for tending the flocks as those with



Fig. 103. White smooth haired shepherd dog from North Germany.



Fig. 104. Long smooth haired shepherd dog from Central Germany, black with yellow points.

lighter colours or even white animals. It is well known that dark colours attract more of the heat of the sun, and a black dog would consequently suffer more from the heat, or be more liable to sun-



Fig. 105. Long smooth haired shepherd dog from Northern Germany, cream coloured.

stroke. White colour occurs in Nature only in conjunction with snow as a camouflage, or else as a sign of degeneration. The animals



Fig. 106. Long smooth haired shepherd dog from Saxony, flaked blue-grey.

on the steppes which are the most exposed to the sun are almost all of a yellowish grey to yellow brown colour, that is to say, similar to the wild dog, and the parts of the body most exposed to the light show the darkest colouring. Wild dog colouring should therefore be the best because it is the most natural protective colour against sun-burn. It is true that a black skin, when left lying in the sun undisturbed, sometimes becomes so hot that it is hardly possible to lay one's hand on it; thus the black working dog would seem to be in danger, but the sheep tending dog does not remain standing quietly on one spot for long. When working, he is continually in motion, the sun therefore does not fall on him in the same place for any length of time, and, when running, he creates a current of air



Fig. 107. Smooth haired shepherd dog from Brunswick, flaked blue-grey.

which cools him off. In repose, he will take good care to choose a shady spot, should the sun be burning a little too fiercely, which however, in our own country is unfortunately very seldom the case.

According to Schämer, each wolf's hair is of faded yellowish colour, nearly white at its root. This pale yellow gradually shades into reddish yellow, and from red into black; then again red, pale yellow, red and black. The black colouring is produced by a thick layer of the colouring matter; and the red by a thinner layer. Schämer considers the pale yellow as the natural colour of the hair cells. In the same way he considers grey and brown to be produced by layers of the same black colouring matter of different strengths, which shows a tendency to diffuse and lose depth as well. In this case,

the lighter colouring of the spots takes an ever increasing possession of the larger parts of the dog (black saddle chiefly on a yellow ground), and extends, fading as it goes, into thin layers of black over the whole body of the dog. In his opinion, the colour of pure white or pale yellow dogs is due, as far as can be ascertained, to the under-development of the colouring matter. From breeding experience we know that impregnation of the hair cells with dark colouring matter in such quantities as produce uniformity of colour is a consequence of breeding in one direction. In the case of animals who are at liberty, a tendency as well to "melanism" (black colouring) is generally found in such districts, where, in consequence of being kept in a confined area, natural inbreeding must frequently have taken place. In cases of overbreeding the black shows a tendency to pale first



Fig. 108. Smooth haired shepherd dog from Brunswick, tiger-spotted, black spots on grey ground, white points.

in the points, which would practically agree with Schämer's theory. Our German shepherd dogs, moreover, have never been bred for colour which for the working dog is a matter of quite secondary consideration. Should any fashion breeder allow himself to pursue such a senseless fad, he might be bitterly disappointed, for even with the parents of the same foundation colouring, pups of an entirely different colour — an ancestral hark-back — might be the result.

At the end of the eighties and at the beginning of the nineties of the previous century, our shepherd dogs, thanks to their characteristic features, had attracted to themselves the attention of all earnest students of dog-life; among whom we may reckon Captain Riechelmann and Graf von Hahn whom we have already mentioned, but also especially the well known painter of hunting and animal

pictures, Herr L. Beckmann of Düsseldorf. The dog races of the country formerly counted for very little in Germany; Germany's interest in the dog was more or less in its infancy; and accordingly wandered, with a preference for the more thoroughbred and more "aristocratic" foreign races. The preference for the German shepherd dog was the German fancier's latest craze, which, thanks to the other races brought into notice by him, certainly far surpassed all others in a few years. On 16th December 1891, the cult of the shepherd dog was instituted for the first-time by the formation of the "Phylax" Society, which however did not last longer than the year 1894. The

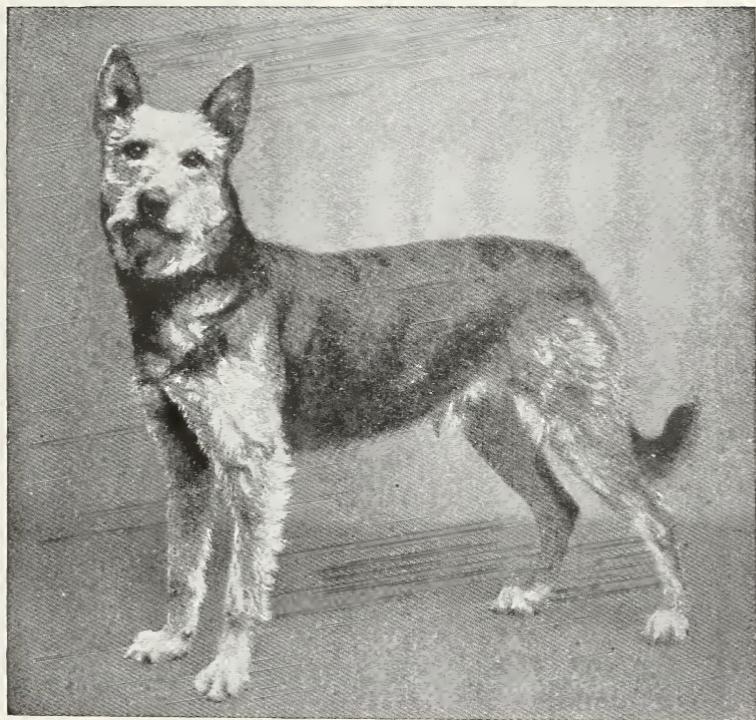


Fig. 109. Rough haired shepherd dog from Wurtemburg, yellow, black "saddle".

number of real and genuine students of the race increased nevertheless, and on April 22nd 1899, a second Society was founded, "Der Verein für deutsche Schäferhunde (SV)", with its headquarters first at Stuttgart, and later on, from the beginning of 1901 at Munich. The history of the activities of this Society on behalf of its object can be found in the first part of the Official Records of "Der Verein für deutsche Schäferhunde, sein Ziel und seine Verfassung" (The Society for the promotion of the breeding of German shepherd dogs; its aim and its constitution). A few more particulars are available

in the 9th part. To-day, as I write this, the SV after an existence of about twenty years, has already a record of 150,000 shepherd dogs in its Official Stud Book (*Zuchtbuch für deutsche Schäferhunde, SZ*)*.

The new friend of the race, when he hears of such a number among which he must ferret and search if he wishes to glean information of the family connections of his prize-bred dog, may experience rather a shock. There is, however, a magic formula which will conduct the groping seeker along the right path, i. e. the knowledge of the constituent blood strains in our present day breed. To this end, I will allow myself to repeat here in an abridged form what I wrote



Fig. 110. Rough (waved) haired shepherd dog from Swabia, black with yellow points.

at the beginning of 1912 as an introduction to the 9th volume of the Stud Book, which just then appeared, as follows:

"When about the end of the 19th century German dog lovers turned their attention to our own shepherd dogs — the Scotch collies were then in the heyday of their popularity —, the party which

* The third part gives information about the aims and regulations of the Stud Book. With regard to its latest achievements, it must be fully understood that in the first years of the compilation of the Stud Book, the dogs as yet were only generally described by the Kennel name of their breeders, and that a change in the dog's name, as well as in the Kennel was permitted. Author's note.

bade fair to gain the preponderating influence was the one which saw in the shepherd dog, not so much the real shepherd dog, i. e. the working dog with his excellent characteristics, as the possibility of turning him into a "fancy dog" with erect ears at all costs, and possibly with a wolf like appearance as well. With some, this desire was based on a liking for his outward appearance; while with others, this name, reminiscent of his ancestry, would secure a higher market value for the dog in question. The original intentions of the founders of the Society whose aims, along with ours, were directed to the improvement of the breed of the working dog, were unforunately suppressed in the first breeding Society of our race, the "Phylax", by their one-sided emphasis on the purely fancy dog breeds. The



Fig. 111. Luchs (Sparwasser) SZ 155.

natural result was that the Phylax, which was limited in general to Northern and Central Germany, began at first to pine, and finally became extinct. The crowd, however, who wished to encourage the fancy dog set their hopes on the so-called "Thuringian shepherd dog" because in him they found most frequently what they prized-most, i. e. erect ears and a wolf-grey colour. This dog was generally wiry and coarse, often somewhat small in size and stocky. As a working dog, he was full of vigour, but when in the hands of the breeders, he often unfortunately deteriorated into intolerable impudence and untamable wildness. A few Thuringian shepherds did good business by whole-sale breeding, of course to the detriment

of the "goods", which were not properly cared for in such mass production. Other shepherds, on the contrary, still remained faithful to the intelligent breeding of genuine working dogs. Such were Arnold from the Birken sheep farm near Blankenheim, Ehnert in Röden, Goymann in Klostermansfeld and Weber in Geussnitz.

In the Frankfort district also, two shepherd dog kennels had been established; in Frankfort itself there was the Kennel of Herr Sparwasser, who always remained a genuine amateur breeder, but who was at that time unfortunately partial to the "fancy" dog; while in Hanau there was the Kennel of Herr Wachsmuth, from whom



Fig. 112. Smooth haired shepherd dog, black with yellow points, a cross between North and South German shepherd dogs. Mira von Grafrath, formerly von der Krone, SZ 112 HGH.

Herr Sparwasser obtained his first breeding pair. The Hanau Kennels grew to become the headquarters for the propagation of the shepherd dog. Scarcely any shepherd dog lover knows of him to-day, except from genealogical trees, but I found not so very long ago in certain advertisement sheets published for foreign countries offers of dogs of the Kennel, which are still described as coming from "Pollux" and "Prima"; although this pair, if this were true, would be getting on for forty years of age. In Hanau the demand was soon in excess of the supply, so it was necessary that Hanau should import from outside, i. e. from Thuringia which is the home of the Hanau breed;

and also from Wurtemberg, where there are many shepherds willing to sell their dogs for a song. The Wurtemberg dogs indeed were not so popular, because erect ears, which alone are perfect in their eyes, were then often wanting, though they surpassed the Thuringian dogs in reliability of the carriage of the tail; for the former often caused regret to serious breeders through their tendency to curl the tail, while less scrupulous breeders very well knew how to "cope" with such trivial details(!). The sins of the fathers then were visited even unto the second and third generation to the melancholy astonishment of their later owners. The Wurtemberg dogs possessed also great advantages in their bodily features, to which formerly however, little attention was paid, except to their size. They were generally big, large-boned, roomy fellows with good hind quarters and swift gait; but, as is so often the case with such lanky customers, they were not bubbling over with "joie de vivre". Still, "what they had, they held".



Fig. 113. Hektor-Linksrhein, called Horand von Grafrath SZ 1.

In Wurtemberg, as is well known, nearly everyone is "dog-dotty", which means something more than "dog-crazy". The Wurtemberger rejoices over his breed, he cannot live without it; he preens himself on his successes; and always feels bound to prepare for more. As a consequence of this, the Wurtembergers, keen breeders that they are, soon found out what their dogs lacked, and what the North German breeders wished to have. So they began in their turn to introduce a dog with erect ears and wolf colour, and thus for the breed of the shepherd dog the "Egg of Columbus" was laid: the crucial point was arrived at in the crossing between the North and the South German dogs; in the fostering and the consolidation of the good points on both sides and in the elimination of the faults.

This crossing also afforded a suitable harmony of the racial characteristics on both sides; and above all, nearly all the dogs brought

from Wurtemberg had seen service and had come to their highest state of perfection as a hard but healthy breed of working dogs.

So Herr Schlenker of Schwenningen acquired from the Wachsmuth Kennels Fritz von Schwenningen SZ 20, who in the past had been universally successful; similarly, Herr Eiselen, while still at Heidenheim, procured for his wellknown Kennels first of all a pair of Thuringian breeding dogs, namely, Max von der Krone SZ 160, and Sali von der Krone; and later on, through a third party Hektor Linksrhein, known as Horand von Grafrath, SZ 1, who came from the Sparwasser Kennels. This dog, bred by Herr Sparwasser — from

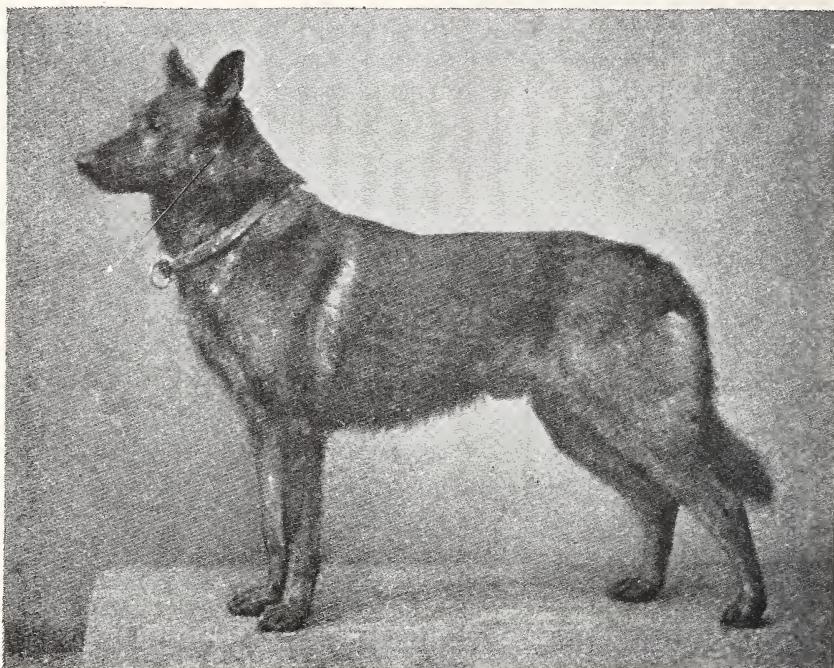


Fig. 114. Hektor von Schwaben, Champion 1900/1901, SZ 13 HGH.

the same litter as Luchs (Sparwasser) SZ 155, shown in our picture — became by this means the fate of the shepherd dog breed, but a good fate; in fact its guiding star. Unfortunately, I must admit, that all this was not accomplished in my Kennel; I was not so fortunate with him as were his previous owners: the more unstintingly therefore can I sing his praises.

Horand embodied for the fancy dog enthusiasts of that time the fulfilment of their fondest dreams; he was large for that period — from 24—24½" height of back, naturally correctly measured, without magnifying glasses; and even from the point of view of present conditions, a very good medium size — with powerful bones, beauti-

ful lines, and a nobly formed head; clean and sinewy in build; the entire dog was one live wire. His character corresponded to his exterior qualities; marvellous in his obedient fidelity to his master; and above all else, the straightforward nature of a gentleman with



Fig. 115. Baron von der Krone, SZ 162.

a boundless and irrepressible zest for living. Although untrained in his puppyhood, nevertheless obedient to the slightest nod when at his master's side; but when left to himself, the maddest rascal, the wildest ruffian and an incorrigible provoker of strife. Never

idle, always on the go; well-disposed to harmless people, but no cringer, mad on children and always — in love. What could not have become of such a dog, if we had only had at that time military or police service training? His faults were the failings of his upbringing, and never of his stock. He suffered from a suppressed, or better, a superfluity of unemployed energy; for he was in heaven when someone was occupied with him, and he was then the most tractable of dogs.

Horand handed on these wonderful characteristics of the high breed to his immediate descendants. These still survive to-day, and we shall see later on that nearly all field trial champions were of Horand strain and possessed his blood to a large degree.



Fig. 116. Beowulf, formerly, Beowulf-Sonnenberg SZ 10.

Horand's most famous son was Hektor von Schwaben, SZ 13, Champion of 1900/01, who was whelped from the Wurtemberg working bitch Mores-Plieningen SZ 159. It was formerly reported that this bitch was the granddaughter or the great granddaughter of a wolf. This report was afterwards shown to be without foundation, and further enquiries proved the contrary. Neither did Hektor, nor his progeny give colour to this rumour in their external features or on characteristics.

Another son of Horand, well-known in his own time was Baron von der Krone, formerly Max II, SZ 162, littered by Madame von der Krone, the Elder, who was also from Wurtemberg working dog

stock. Baron soon came into bad hands, and accordingly did not accomplish anything very noteworthy for his breed. On the other



Fig. 117. Hussian von Mecklenburg SZ 6467 PH.

hand, there came from Baron's own sister, Thekla I von der Krone, by her half-brother Hektor von Schwaben SZ 13 (see above), the well known Beowulf formerly Beowulf-Sonnenberg and Wolf SZ 10

who, just as his less known brother Pilot SZ 111 had Horand as grandfather on both sides.

Beowulf's descendants are better known to a younger generation of breeders, therefore there is no need to mention more than a few details. Perhaps it were better on account of the fecundity of Beowulf to speak of a Beowulf, rather than a Horand stock, were it not for the fact that Horand blood has become the beau ideal for the breed; not only so far as this dog is concerned, but also for a whole number of blood relatives, who as representatives of our breed, are found in all the Stud Books, far and wide.

Anyone who is investigating the matter with any thoroughness, should not neglect the Pollux strain, because all the families which

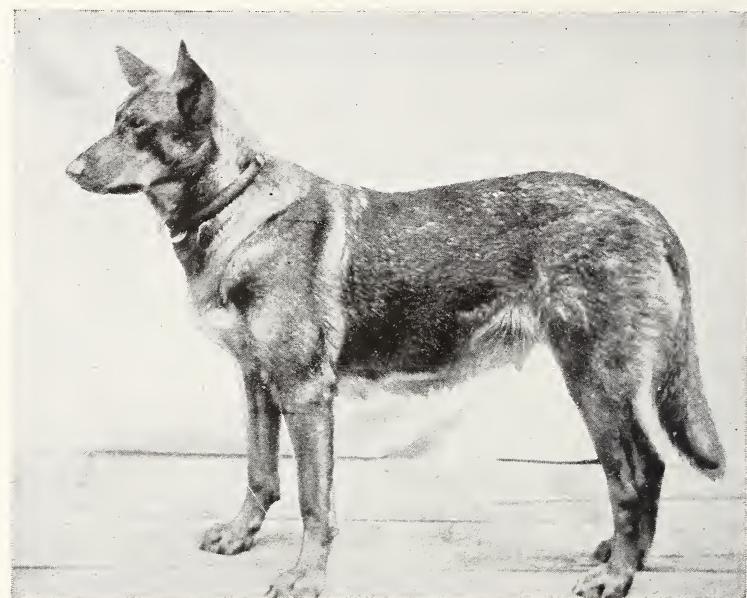


Fig. 118. Elsa von Schwaben, Champion 1901 SZ 34.

we designate to-day as "Horand strains" trace back to this Pollux SZ 151. Unfortunately Pollux made himself very unpopular with the breeders, less through his own fault than through that of his owner, who believed it was impossible for him to loose from his pedigree-forms this former page of glory. Therefore at the present time Horand's name is generally used to indicate the genuine Pollux stocks, because his merits are undoubtedly, and according to the Stud Book, settled, signed and sealed.

One of these sons of Pollux, who in the present meaning of the word belongs to the Horand family, was the above mentioned Fritz von Schwenningen SZ 20. From this connection with the Wurtemberg bitch Fides von Neckarursprung SZ 19 HGH sprang, for example, Schwabenmädel von Grafrath SZ 3, which, by her Beowulf — daughter,

Fee vom Lindenholz SZ 2843, is related to Hussian von Mecklinburg SZ 6467 PH, a son of Roland von Starkenburg. Then Schwabenmädchen's litter sister, "Flora", which in pedigrees (formerly unfortunately such a thing was still possible) — was described as Flora von Brötzingen, also as Flora von Karlsruhe, and as Flora 1 von Karlsruhe (Jauch), ought, according to present day ideas to have adopted the breed name of Neckarursprung, just like Schwabenmädchen. By this "Flora", which has no registered number in the Stud Book, was whelped, after Hektor von Schwaben SZ 13, Roland vom Park, formerly vom Goldsteintal, Champion of 1903. This same dog, though



Fig. 119. *Regina von Schwaben*, SZ 411, Champion 1904.

a very promising Horand grandson, unfortunately did not achieve very successful results for the breed. He also came into bad hands, and had to mate with bitches of alien blood; and therefore could not transmit his strain in any appreciable degree, because he was first and foremost and most excessively regarded as a business proposition. That he could produce good results when suitably mated, he proved to his first owner; for from him and his blood relative Nixe von Goldsteintal SZ 87, there came as a side connection in the second degree, Wotan von Emstal SZ 6813, Champion of Austria in 1910 and Tell von der Kriminalpolizei SZ 8770 PH, Champion of 1910.



Fig. 120. Dewet Barbarossa, formerly Eislingen SZ 630 PH.



Fig. 121. Vefi von der Burghalde, SZ 339, Champion 1905.
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I have just mentioned the Wurtemberg Fides von Neckarursprung SZ 19 HGH. From her was bred by Herr Jauch of Schwenningen, after the similarly pure Wurtemberg working dog, Carex-Plieningen, SZ 158 HGH, Elsa von Schwaben SZ 34, champion of 1901, who ought also to retain Herr Jauch's Kennel name of Neckarursprung. From Elsa, after Beowulf SZ 10, came (with Horand blood as well) Regina von Schwaben SZ 411, Champion of 1904. After the death of the owner Herr Leeb, the Memmingen Kennel



Fig. 122. Siegfried von Jena-Paradies, formerly Barbarossa SZ 1339
KrH PH SH. Field trial Champion 1906.

(which in its time achieved considerable popularity) produced many successful descendants.

Horand's litter brother Luchs (Sparwasser) SZ 135 furnishes another root to the Horand family, who, through his son Rex (formerly Rex von Karlsruhe or Wolf) SZ 14 leads to the Dewet line by means of the litter brothers Rex von Karlsruhe SZ 61, and Prince von Karlsruhe SZ 735.

Dewet Barbarossa, formerly Eislingen SZ 630 PH was whelped from Prinz von Karlsruhe SZ 735, and Sara von der Krone SZ 103

HGH, who, on her side was a daughter of that son of Horand, Baron von der Krone SZ 162, and from Lida von der Krone HGH (Max von der Krone SZ 160 — Sali von der Krone); he has also Horand blood to a very great extent. I must now go back to the Horand and Beowulf line, from which I digressed to follow up this Dewet branch further. Beowulfs' most valuable contributions to the breed are to be found in the bitches which he fathered. The best known are those which were whelped in the Kennels of Burghalde von Scheuerle



Fig. 123. Audifax von Grafrath, SZ 368, HGH.

Kempten, i. e. the sisters Hella von Memmingen SZ 329, champion in 1902/03 and Vefi von der Burghalde SZ 339, champion in 1905, which he begat from the Horand daughter Nelli-Eislingen SZ 11. These bitches accordingly have in themselves four strong strains of Horand blood, while the fourth reverts again to the Krone family (Max-Sali) by way of Nelli's mother Ella-Gmünd. This last mentioned strain was, as we saw above, also found in Dewet. His association with Hella von Memmingen SZ 329 meant the closest inbreeding and led on the one hand to that remarkable champion of

1906 Siegfried von Jena-Paradies, formerly Barbarossa, SZ 1339 KrH, SH, PH and to Ella vom Erlenbrunnen, SZ 4540, champion of 1909; and on the other hand, in conjunction with another line of the Horand family, (of which we shall have to speak more in detail,) that of Luchs vom Karlsmunt-Wetzlar, champion of 1908.

Another good and further continuation of the Dewet line leads to the Siegestor Kennel of Kaltenbrunnen, Munich. There, Horand blood is found mixed with that of Audifax von Grafrath SZ 368 HGH. Audifax, who came from Swabian working dog stock, was pitchforked into this aristocracy as an absolute outsider. It was at that time, twenty years ago, a necessary attempt to give a broader basis



Fig. 124. Aribert von Grafrath, SZ 517, Champion 1904.

to the breed. A big mighty fellow, with excellent dorsal muscles and a correspondingly swift gait, Audifax most certainly transmitted these good qualities; and often, as well, his somewhat over developed head (according to the ideas of the times). From this thoroughbred family of Horand and Krone blood, there was whelped by him Aribert von Grafrath, SZ 517, champion of 1904.

In a fourth branch, finally, the Horand-Dewet line leads by way of Brunhilde von Ludwigshafen, formerly vom Nibelungenhort SZ 1847 (who already combined in herself Horand-Bewulf and the Grafrath-Horand line, through which connection we had Beowulf vom Kohlwald, formerly von Ludwigshafen, SZ 4090), with that most sharp descendant of the Horand branch, Hella von Memmingen,

SZ 329, champion of 1902/03, to Norbert vom Kohlwald, SZ 9264 PH, champion of 1911.

The Horand-Beowulf line, through the connection of Horand with bitches of Thuringian working dog stock, produced also Beowulf vom Nahegau SZ 733, champion of 1905, belonging to the Nahegau

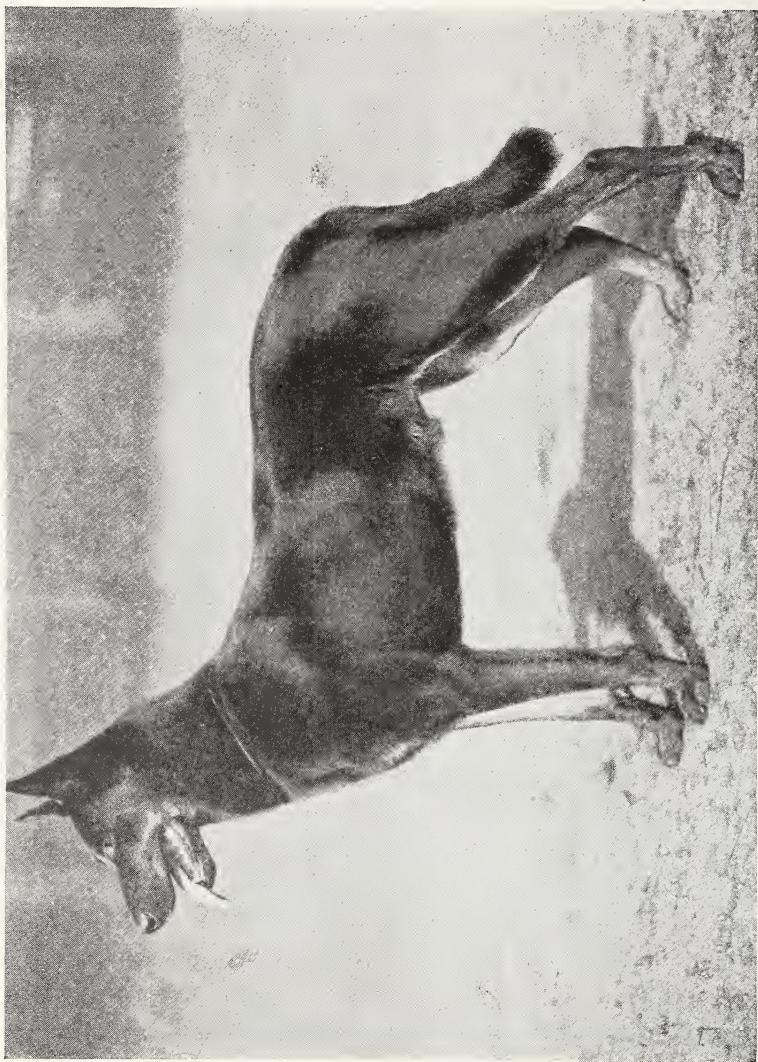


Fig. 125. Norbert vom Kohlwald, SZ 9264 PH, Champion 1911—12, Champion of France and Holland Holland 1912.

Kennel, Dose-Kreuznach, and also Jokel von Schwetzingen SZ 1861 HGH. The last named dog came to the Altfeld Kennels, Brandstätter-Fürth, where he was the mainstay of the Frankish breed.

The Horand-Beowulf line comes then through the Hohen-Esp line to a similarly clearly defined conjunction, just as in the case

of Hella von Memmingen (Hohen-Esp Kennels; G. Hagmann-Kirchheim u. T.). Graf Eberhard von Hohen-Esp, called, Hektor, SZ 1135 is descended on his father's side from a union between Beowulf's brother Pilot, SZ 113, with Nelli II Eislingen the Elder. Although



Fig. 126. Graf Eberhard von Hohen-Esp, called Hektor SZ 1135.

there is no more information to be derived as to the origin of this Nelli II Eislingen the Elder, there is yet no doubt that she is an elder sister of Nelli Eislingen II the Younger, even if she is not that bitch herself. Fifteen years ago information could not be obtained as easily from the Stud Book as now, so it may be that, even as this

Nelli Eislingen II the Younger, (who is the mother of Graf Eberhard the Younger) Nelli Eislingen II the Elder may be a daughter of that son of Horand, Hektor von Schwaben SZ 13, and the Horand daughter

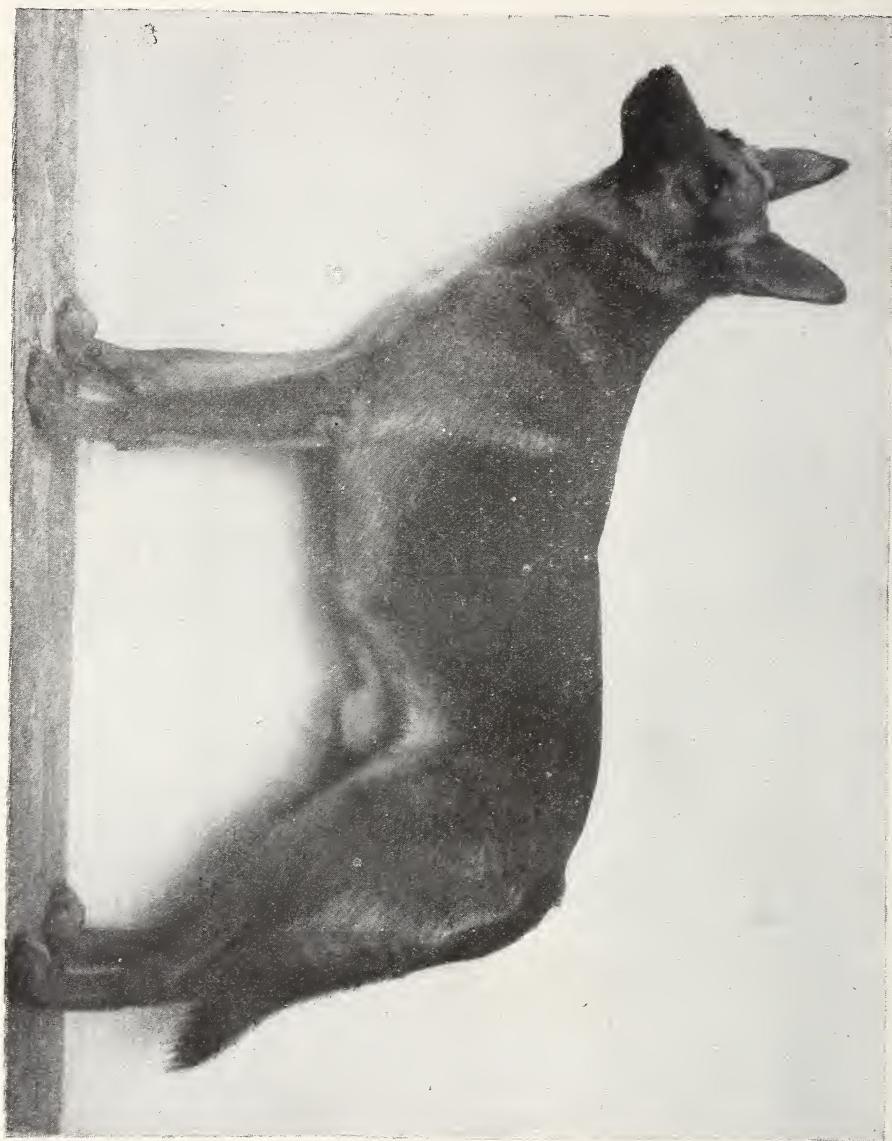


Fig. 127. Munko von Boll SZ. 3776, HGH.

of Nelli Eislingen, SZ 11. We need not lay special emphasis on the notable results achieved by Graf Eberhard in his influence of the inner qualities of the Wurtemberg breed. There came from him, for

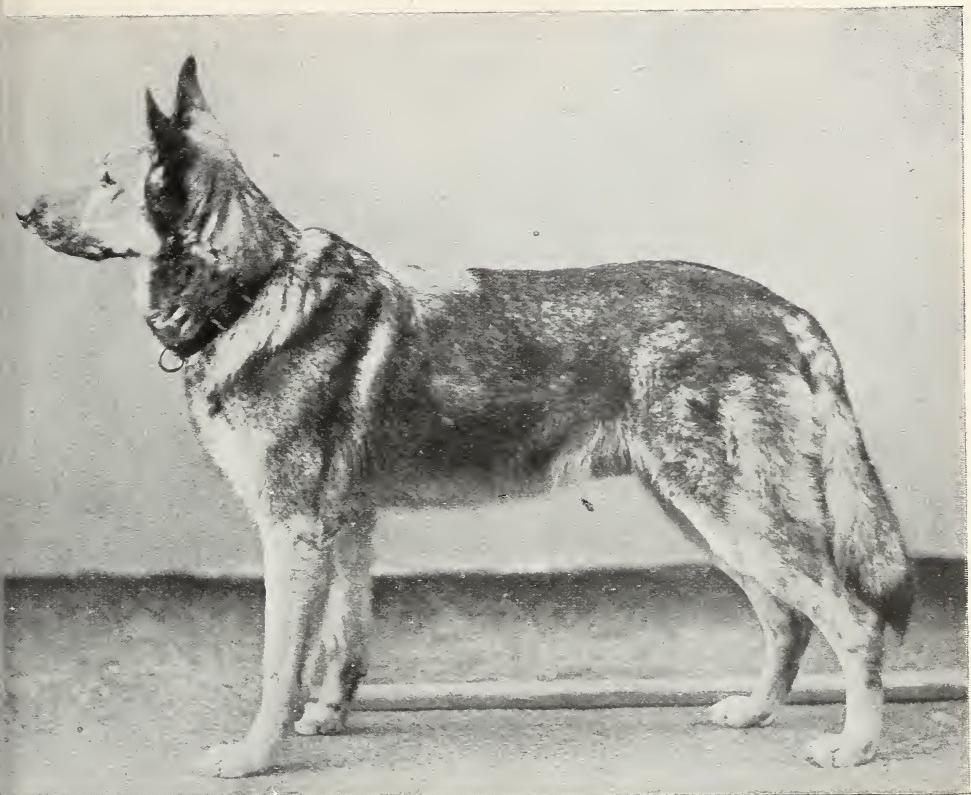


Fig. 128. Luchs von Kalsmunt-Wetzlar, SZ. 3371, Champion 1908.



Fig. 129. Wotan vom Emstal SZ 6813, Champion of Austria 1910.



Fig. 130. Tell von der Kriminalpolizei, SZ 8770 PH, Champion 1910.



Fig. 131. Flora von der Kriminalpolizei, SZ 12965.

example, Munko von Boll, SZ 3776 HGH. His best result was produced with Minka Barbarossa, SZ 1034 PH, who, as remarked above, descends from the Horand-Hella branches. From this bitch, after Graf Eberhard, came Luchs vom Kalsmunt-Wetzlar, SZ 3371, champion of 1908, who with Tillie vom Goldsteintal, SZ 1965 (a daughter of that Beowulf son) begat Beowulf vom Nahegau, SZ 733, champion of 1905; and with Rassy vom Goldsteintal, SZ 1028, (who also had Horand blood), begat Wotan von Emstal, SZ 6813, champion of Austria 1910.



Fig. 132. Hella von der Kriminalpolizei SZ 13748, Champion 1911/1912,
Champion of France and Holland 1912.

There came also after Luchs vom Kalsmunt, the two champions of 1910 Tell von der Kriminalpolizei, SZ 8770 PH and Flora von der Kriminalpolizei, SZ 12965; while he was grandfather of the champion of 1911/12 Hella von der Kriminalpolizei, SZ 13748, who was a daughter of Tell of the Kriminalpolizei, SZ 8770, champion of 1910, and whose grandmother, on his mother's side was Fanny von der Kriminalpolizei, SZ 3950 PH.

From these three champions, bred in the Kriminalpolizei Kennels, Decker, Wiesbaden, another new strain was introduced into the Horand-Beowulf and the Horand-Dewet stocks, which up till now

has not been mentioned; and has brought out also an intimate embodiment of the Horand strain, namely, the Horand-Starkenburg line.
Roland von Starkenburg, SZ 1537, champion of 1906/07 (from



Fig. 133. Roland von Starkenburg SZ 1537, Champion 1906/1907.

the Starkenburg Kennels of the late Herr W. Spielmann at Gross-Steinheim on the Main) who was bred from Bella von Starkenburg after Heinz von Starkenburg (neither of whom are registered) has for his grandfathers the Horand son Hektor von Schwaben, SZ 13 and Beowulf, SZ 10, who was a grandson of Horand on both sides; but for grandmothers on both sides Lucie von Starkenburg, SZ 131 who, as a daughter of Pollux and Prima, SZ 152 also possessed Horand blood as we saw before.

This Horand-Starkenburg blood has achieved extraordinary popularity with the breed in the last few years. After Roland von Starkenburg, SZ 1537, champion of 1906/07, there were born, among

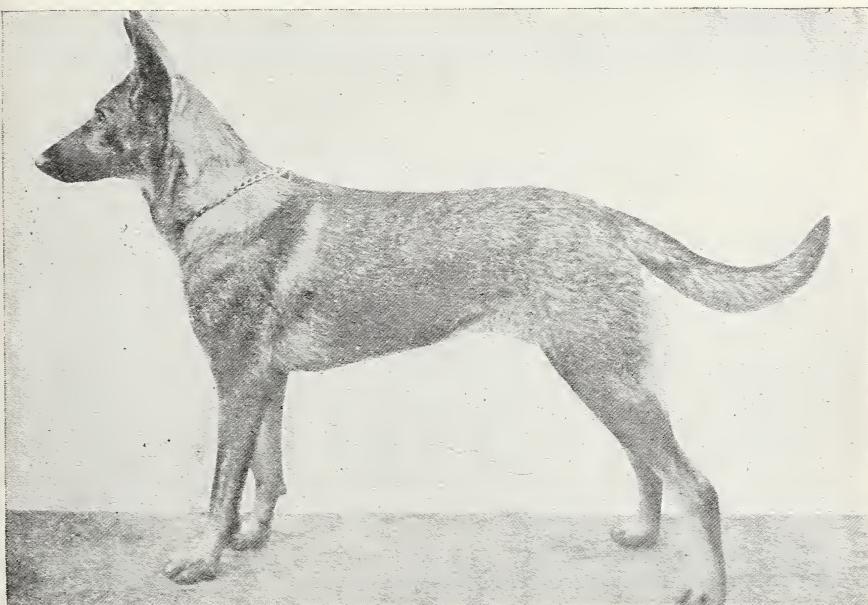


Fig. 134. Flora von der Warte SZ 4831, Champion 1908.

others, Hulda von Siegestor, SZ 4831, champion in 1907 (who had Horand-Audifax blood) and Flora von der Warte, SZ 4831, champion in 1908, whose mother Julie von Brenztal (not registered) also possessed much Horand blood. The Starkenburg Roland is grandfather to Tell von der Kriminalpolizei, SZ 8770, and Flora von der Kriminalpolizei, SZ 12965, who were both champions in 1910. He was mated with the above mentioned Fanny von der Kriminalpolizei, SZ 3950, from which association came Herta von der Kriminalpolizei, SZ 3951, who was mother of both the 1910 champions. In conclusion, Roland von Starkenburg is also father of Hettel-Uckermark, SZ 3897 HGH, champion of 1909, in whom the Horand-Starkenburg blood again mixed with the closely related Horand-Beowulf blood of Gretel-Uckermark, formerly von Hohen-Esp, SZ 357, who belongs to the

Wurtemberg working dog family. Another elder brother of Hettel, (also bred in Dr. Poppe's Kiel Kennel, Uckermark,) is Guntar-Uckermark, SZ 2980, who, standing in the Osterdeich Kennel of Frese-Bremen, has also had a great deal to do with the progress of the breed.

It still remains for us to touch on a few side lines and on one or other of the lesser "stars". The champions of 1899 who were first



Fig. 135. Hettel Uckermark, SZ 3897, HGH, Champion 1909.

called so by the SV at its first Exhibition at Frankfort on the Main in the September of that year have been entirely lost sight of, i. e. Jörg von der Krone, formerly known as "von Schw.-Gmünd", or Wolf, SZ 163, and Lisie von Schwenningen, SZ 30, respectively. Jörg who was a handsome powerful dog whose antecedents have not been accurately determined, (al though he must have come from Luchs, (Sparwasser)

SZ 155, brother of Horand, or after his son Rex, SZ 14,) appears in a few pedigrees. Lisie von Schwenningen. SZ 30, who came from the Hanau Kennel, but not from the Pollux family, has remained without any importance for the breed. If I recollect rightly, she came early to the East, and figures in some of the records there, perhaps as an ancestress.



Fig. 136. Gretel Uckermark, formerly von Hohen-Esp, SZ 849,
Champion 1906.

Peter von Pritschen, SZ 148, KrH, PH, champion of 1902, a son of Horand, whelped from Lotte von Klostermansfeld, SZ 17, HGH, of Thuringian working dog family (breeder, Schafmeister Goymann-Klostermansfeld), after a short and successful career at Exhibitions,

retired to a comfortable and quiet life. He would have been our first champion for Field Trials, if we had bestowed such a title at our first modest Training Competition. His reliable work was an excellent advertisement for our Concern, and brought many new friends and



B.S. & Co.

Fig. 137. Peter von Pritschen, SZ 148, KrH PH Champion 1902.

supporters to the Working Dog Movement, and above all taught many to understand what can be developed and expected from a well-trained dog. With these three dogs, the ranks of our famous dogs are complete.



Fig. 138. Pax vom Brenztal, called Fritz SZ 1438 HGH.

The Swiss breed has its mainstay in the Wohlen family which traces its descent from the Habsburg dogs (Wurtemberg working dog blood), the Krone and the Horand families, and which, later on, was strengthened by means of further infusions, chiefly from the Krone and the Memmingen Kennels. From this breed came Tutilo

Alpina, SZ 2516, who, finding himself at Hamburg, had a very suitable partner in Hulda vom Siegestor, SZ 2581, champion of 1907.

In conclusion, there is one "outsider" to mention which Rössle-Giengen brought in to the breed and which was much employed in his Wurtemberg home; Pax von Brenztal, also called Fritz, SZ 1438 HGH, whose mother was of Wurtemberg working stock and whose father was possibly Fritz von Schwenningen, SZ 20, but it is enough to observe that it has not been ascertained for a certainty. Pax had an excellent body on the lines of the working dog; in breeding he did best, no doubt, with Perle von der Krone, SZ 3058 HGH, who on her

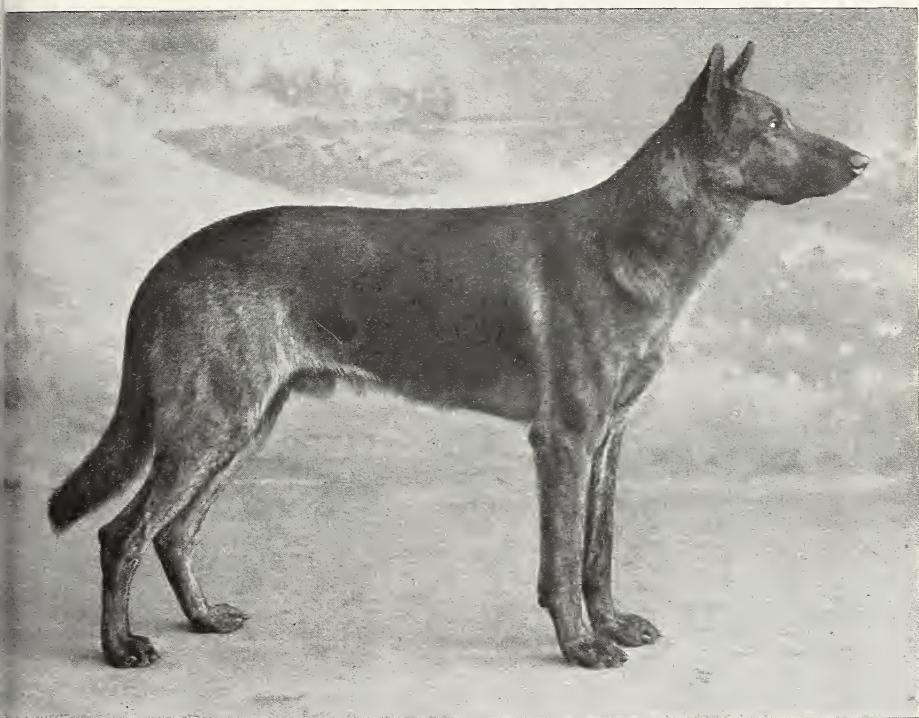


Fig. 139. Arno von der Eichenburg, SZ 24876, Champion 1913.

father's side inherited Horand blood. From this connection came for example, the universally known Udo von Falkenstein, SZ 3030 PH, who in the Falkenstein Kennel of Schaeffer, Dresden, was of great importance for the Saxon breed.

While on the matter of bitches of alien strain, we might as well mention here Rosel von Jena-Paradies, formerly vom Brenztal, SZ 974 HGH, who came from Wurtemberg to the Jena-Paradies Kennel of Kämpfe, Jena. This bitch, who came from Wurtemberg working stock and from the Krone family, found a suitable mate at the same Kennel in Siegfried von Jena-Paradies, formerly Barbarossa,

SZ 139, KrH PH SH, field trial Champion 1906. The breeding successes of the Blossenburg Kennel, Stössel-Erfurt, are mainly due to one of the offspring of this pair, i. e. Christel von Jena-Paradies, SZ 3009, who was led to Roland von Starkenburg. From Diana von der Blossenburg, SZ 8273 PH, who was whelped from this pair, came Arno von der Eichenburg, SZ 24876, champion in 1913; while Frigga von Scharenstetten (Hentz-Scharenstetten, Kennel Würt.), united in herself Horand-Hohen-Esp blood, Boller blood (Geiger, Boll Ort) with its strong Horand and working dog strain, and also pure Horand-Beowulf and Audifax blood.



Fig. 140. Frigga von Scharenstetten, SZ 18742, Champion 1913.

I said above that Horand blood could be found in many field trial champions and I maintained there that it was just in virtue of the blood derived from him that our race was especially fortunate. Numerous shepherds and service dog trainers have frequently expressed the same opinion; no dog works so easily and so reliably as those possessing the Horand strain. Peter von Pritschen SZ 148 KrH PH was mentioned by me above as one of the most successful working dogs. Along with him, stood formerly — I only select a few which have come under my immediate notice — Hanni von Graf Rath, SZ 282 HGH, Thor vom Lützelhard, SZ 371 PH, Resi von Wohlen

SZ 388 KrH, Tillie Barbarossa SZ 473 KrH PH, Ulfilas vom Wölffhof SZ 574 KrH PH, Jasomir von Memmingen SZ 581 KrH PH, the Bavarian war dogs Grimgerde von Grafrath, SZ 175 KrH, and Nella, SZ 1710 KrH; and lastly, police sergeant major Weissbecker's well known service dog Luchs von Frankfurt, SZ 3201 PH. All are either descendants of, or else have some Horand strain.



Fig. 141. Pan SZ 3202, KrH (left) Field trial Champion 1908, and Siegfried von Werne SZ 4286 PH (right).

The title of field trial Champion was conferred for the first time in 1906. It was given to the afore-mentioned Siegfried von Jena-Paradies, formerly Barbarossa, SZ 1339 KrH SH PH, who, as already explained, has left his mark on the breed, and, as the result of a form determined by careful breeding, has shown himself to be of good family,

of exceedingly fine build and has further transmitted his characteristics in no uncertain way (see No. 122). Of the parentage of the Field trial Champion in 1907, Pan SZ 3202 KrH SH PH, we unfortunately possess but little information. On the other hand, in the case of the Field trial Champion 1908, Siegfried von Werne SZ 4286 PH, both his grandfathers have Horand blood, and one grandmother has Horand and Fides blood. So too, in the case of the Field trial Champion of 1910, Frack vom Polizeipräsidium Berlin, formerly



Fig. 142. Frack vom Polizeipräsidium Berlin, formerly von der Eiche SZ 6534 PH, Field trial Champion 1909/1910.

von der Eiche SZ 6534, on his father's side; he can trace back to the Horand-son Hektor von Schwaben SZ 13 and Baron von der Krone SZ 162; and on his mother's side, back to the Krone family. In conclusion, Lady von Arizona SZ 1892 PH, Field trial Champion of 1912/13 comes, on her sire's side, from North German working dog stock (apparently a variety from the Harz or Hanover districts), but on her mother's side, she traces back to the pure Horand-Dewet family and to Fritz von Schwenningen SZ 20. The Field trial Champion

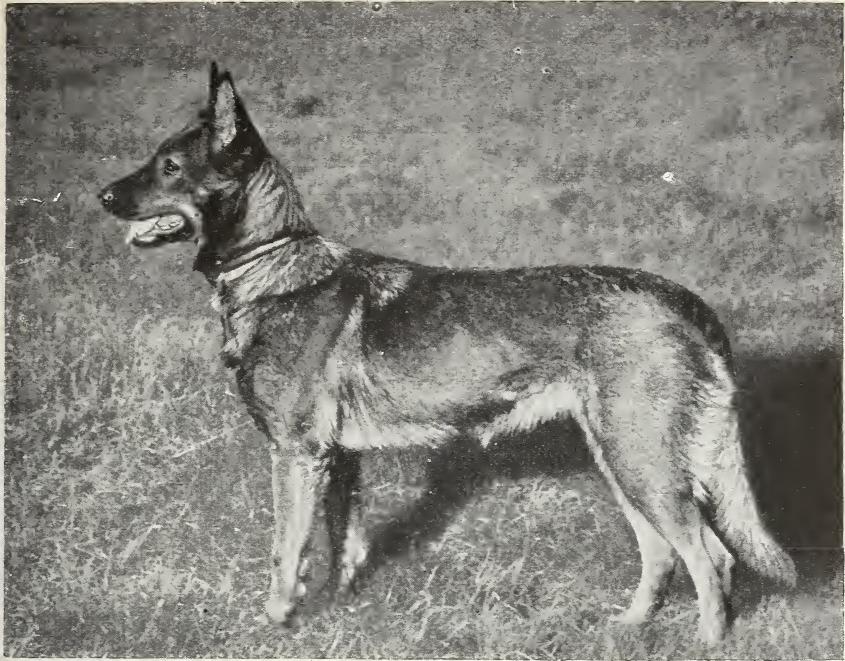


Fig. 143. Lady von Arizona SZ 18192, PH, Field trial Champion 1911/1913.



Fig. 144. Debora von Sehningen SZ 18319 PH.

v. Stephanitz, The German Shepherd dog.

of 1912, however, (who was given the award for the best dog or bitch at the annual trials), Deborah von Sehningen SZ 18319 PH came by Munko von Boll SZ 3776 HGH from Kitty von Boll SZ 4384 HGH; on both sides, of the family she traces back to sheep tending dogs, but in her grandparents on both sides she has a very strong Horand strain.

The Champions of Competition Tending in 1901—1904 are of pure working dog breed. The Champion for Tending in 1905 Liebert, SZ 3203 HGH, has Fritz von Schwenningen, SZ 20, as grandfather. The Champion for Tending of 1907 Madame/Dillingen, SZ 3614 HGH,



Fig. 145. Neckar (Knörzer) SZ 34740, HGH Winner of Tending Competition 1913.

is a Horand grandchild. The family pedigree of the Champion for Tending of 1908, Karo. SZ 4653 HGH, is unknown; but Rosa von Buchen, SZ 2010 HGH, Champion for Tending in 1909, on the other hand, has two strong Horand strains (through Baron von der Krone, SZ 162, and Beowulf, SZ 10); the same too is the case with Dame von der Weide. SZ 11,999 HGH, Champion for Tending in 1910, who is a grandchild of Hektor von Schwaben 13. Fricko, (von Schw.-Gmünd) SZ 18920 HGH, Champion for Tending in 1911 is again of pure working dog stock; but the Champion for tending in 1912 Luchs, (Hagmann) SZ 33604 HGH, as a son of Munko von Boll, is of pure Horand blood on his father's side; even as Neckar, (Knörzer) SZ 34740 HGH, Champion for Tending 1913, who had the same father. With this ends the

line of Champions when the War broke out in 1914, for no special instructions were issued by the Society (SV) which granted the title, and also too, because these Exhibitions could not be held during the war.

This then is a very abridged resumé of the evolution of the German shepherd dog from the time when the SV inaugurated its activities till the commencement of the Great War. Whoever will compare the pictures with accompanying data will soon understand how, in about fifteen years of breeding, the external points of our dogs have come to their present state of high development. This would be impossible to achieve in so short a time except in the case of a race unspoilt by breeding, for although their natural talents remained concealed from the eye, yet the strength of inheritance was there all the time, which was bound to force its way to the fore as



Fig. 146. Shepherd dog on the Rittnerhorn near Bozen, Southern Tyrol.

soon as any effort was directed towards developing the exterior features. The ideal of the Society was to develop Police trial Champions out of Exhibition Champions, our shepherd dog therefore, was further developed by dog lovers as a working dog. The standard by which he would be judged and approved was this, namely, Utility is the true criterion of Beauty. Therefore our dogs exhibit everywhere to-day, in a fittingly developed frame, (and never, as the caricatures of Nature, the greatest of all Teachers) a build of body, compacted and designed for the highest possible efficiency, spare and powerful, with wonderfully well-proportioned lines which immediately attract the connoisseur, who soon recognises that such perfect adaptability imparts a capacity for quick turning and powers of endurance.

Let us now direct our attention to shepherd dog breeds outside Germany, with special reference to those which have not yet been

described and illustrated in the accounts already given of the herdsman's dog and driving dog varieties. Let it once more be emphasised that, in the case of these dogs also, they are the descendants of dogs of a similar ancestry, who developed themselves under similar conditions of life, till they reached their present form and utility. The working dogs of the various countries concerned, which in England and Belgium have been highly bred in a few instances only, naturally form the foundation for the following discussion.

In German-Austria and Bohemia the shepherd dogs correspond to our own, especially to the working dogs of South Germany. I have already described the tending dogs of the other countries of the former Empire of Austria.

There exist no Breeders' Societies in German-Austria nor in Hungary; nor in any of the "New States" carved out of the former



Fig. 147. Sheep feeding on the South Tyrolian Alps.

Imperial Dominions. The taste for our highly bred German shepherd dog, which had already been widely introduced into Austria before the War, had made important progress during the War, thanks to the splendid services they rendered the various armies. There has been a demand for our race on the other side of the frontier since 1912 from the "Österreichische Verein für deutsche Schäferhunde" (Ö. SV) (The Austrian Society for the German shepherd dog), which was a central grouping of our local associations, made necessary by the Austrian law dealing with Societies, and which also cooperates with the "Österreichische Kynologen-Verband" (Austrian Cynological Society), which is the representative body dealing with all things pertaining to the dog. In Czechoslovakia there exists the former District Association which is now independent and belongs to the SV, "Verein für deutsche Schäferhunde in der Tschecho-Slowakei", with its headquarters at Brünn, and several local groups.

In Scandinavian countries, in Finland, and in Russia, (including Poland), the demand for our dog had made fairly considerable pro-



Fig. 148. Lida vom Kronenhof SZ 27934.
In the background is the Ortler Spitz, over 15,000 feet above the sea-level,
the highest peak in the Tyrolian Alps.

gress already before the War. They were imported into Russia in large numbers as service dogs, and "the Imperial Hunting Society" regulated the Exhibitions. In Finland, they have recently begun to employ the German shepherd dog in Police Service. The two Police dog Societies of Sweden "The Swedish Police and Safety dog Society (Svenska Polis-och-Skyddshundsföringen), with its headquarters at Gothenburg, and "the Society of Swedish Safety- and Sanitary dogs" (Föreningen Svenska Skydds- och Sjukvårdshunden), with its headquarters at Stockholm will use none but our dogs in their service. The chief place for the encouragement of dog breeding etc. there is the "Svenska Kennelklubben", (Swedish Kennel Club). In Denmark, since 1918, there has existed the "Danish Club for the German shepherd dog" (Dansk Schäferhundeklub), with its head-



Fig. 149. Short smooth haired Dusch shepherd dog.

quarters at Horsens; this is a department of the "Dansk Kennelklub", which recently succeeded in renaming what was formerly the "Tysk Hyrdehund" and the "Tysk Schaeferhund". Everywhere, then, in all these countries the SV is the official representative of its race.

So far as shepherd dogs may be used with the sheep in Switzerland, most of these have been imported from Wurtemberg and some from Alsace as well; and, as is only natural, the French strain and that of the Bergamese are also found there. Our race is fairly strongly represented among the fanciers, but it is also used in service as a working dog. Since 1902, the "Schweizer Club für deutsche Schäferhunde, SC" (The Swiss Club for the German shepherd dog) has been making its activities felt alongside of the SV as a breeding Club; it is a branch

of the "Schweizer Kynologische Gesellschaft (SKG)" (The Swiss Cynological Society), which however recognises our Pedigree and uses our Stud Book along with that of the SHSB.

In Holland three types of hair covering are recognised for their own shepherd dogs; the short smooth haired, rough haired and the long haired. Otherwise the dogs resemble our own; they are powerfully built; on an average they are perhaps a little smaller — the



Fig. 150. Belgian country stock shepherd dog, as watch dog, in a farm yard in West Flanders, (from a photograph by the Author).

smallest measurement from the shoulder for the Rude is $21\frac{1}{2}$ ", for bitches 20", just as with us the shepherd dog of the North West is smaller. "Der Nederlandsche Herdershonden-Club (NHC)" with headquarters at Amsterdam is the official Society which fosters in that country the interests of its own native breed, and very rightly lays down no hard and fast rules about colour, (as do the Belgian breeding Societies), but, even as the SV, recognises that colour is a secondary consideration. The cult of the German shepherd dog in

Holland has made extraordinary progress, which, owing to the excellence of their own breed is hardly intelligible. After the founding over there of the "Nederlandsche Vereeniging voor Duitsche Herdershonden (NVDH)" in 1913, with its headquarters in Utrecht, there was also created in 1918 the "Vereeniging van Vokkers en Liefhebbers van Duitsche Herdershonden (VDH)" with headquarters in Rotterdam. Both Societies belong to the SV as branches and only use our Stud Book; and in Holland they both have their National Representative in the "Raad van Beheer op Kynologische Gebied in Nederland". The Pedigree Tables are drawn up in Dutch, and the official journal issued by each Society was afterwards amalgamated to form one combined publication.

In Belgium, the country stock naturally also corresponds to our own. Shepherd dogs are there in very large numbers, perhaps more so in proportion than in Germany; we find, moreover, the rough haired driving dogs (Bouviers) already mentioned. In 1915 I saw no dogs in Belgium with the small stock, for which the War was probably responsible. This may also be explained by the fact that only large stock is kept by the majority of people who pasture their cattle on



Fig. 151. Belgian and German smooth haired shepherd dogs.

the rich enclosed allottments, and these cattle immediately try to attack a passing dog. This experience I had nearly every day in West Flanders with the service dog of my regiment who accompanied me all over my area. Among the Walloons, South of the Maas, through which the terrible closing stages of the War led me, the dogs had already been appropriated throughout the district for training in the Intelligence Service. The people in my billet recognised my dog to be a shepherd dog. In West Flanders, in the first year of the War, I found the shepherd dog still everywhere as yard dog; in nearly every farm yard they had built for him a hive-shaped brick kennel. In the towns, the short thick haired variety prevailed; in the district of Brussels on the other hand, the black long haired kind were found; there also all the dogs wore the infamous muzzle, an enclosed solid leather covering, in form like a dice box, with a tiny hole for the nostrils.

Dogs were used very much for draught; one could see them yoked with, and working alongside of men. I even saw dogs pulling an invalid chair, harnessed sometimes in front and sometimes at the side. I did not see them working singly; pairs were the rule; shepherd dogs often with the rough haired driving dogs, and in the not infrequent cases where they were used in threes, the stronger „Bouvier” dog was harnessed between the other two. Occasionally the dogs are not harnessed in front of, but under the cart, and sometimes one or two are in front, and one under the cart; and again, I have seen in the shafts a small light horse, and under the cart a strong dog. The half- or even the full-grown Jehus often squat on the tiny cart and run races, pitting their turnouts against the 20 mile an hour gait of the troop trains.

The breed in Flanders was mostly very powerful with a genuine shepherd dog appearance; in hair and colouring seldom pure, that



Fig. 152. Short smooth haired Belgian shepherd dog of Malines.

is according to the standards of breeding among the breeders; often with stumpy tails, which might be a result of crossing with the Bouvier. The black long haired dogs, when compared with our dogs, are of fair medium growth, but the hair gives them more the appearance of size and similarity. The dogs with different kind of hair, i. e. with short smooth hair, on the other hand, are noticeably smaller and weaker in the bones than our smooth haired dogs. When I say this, I am not speaking of the average dimensions of our present day fancy bred dogs. The picture (Fig. 151) gives a good idea of the relative sizes of the German and the Belgian shepherd dogs. The main objections to these dogs of the Belgian breed from the point of view of utility were the thin leg bones and the light head with the all too weak upper jaw. The gait was in harmony with the light build, springy enough, but not covering much ground.

The Belgians are zealous and clever breeders, but the breeders of the shepherd dog entirely overlook the question of utility and emphasise the importance of the external appearance, which after all is only subsidiary. The shape of the head, the carriage of the ears, the tail, the hair, and above all, colour weigh with them. Everything in hair and colour which does not sufficiently fall in with what any of these paltry little Societies consider as ideal in the race is considered as not "race pure". The results of inbreeding which naturally must become more and more inevitable, are bound to appear, because an invigoration of the strain of the dogs, by means of dogs from the country stock, is rendered impossible by such narrow minded



Fig. 153. Rough haired Belgian shepherd dog (commencement of faulty curly hair).

ideas. From the three original kinds of hair, the amateur breeders have made, first, three original distinct colours, and then, in their ceaseless pursuit towards the super-refinement of external details, they have actually drawn six distinctions:

Short smooth hair; pale yellow to reddish yellow, with light colour flake; and recently a black mask: for the dog of Malines (Malinois).

Short smooth hair, black (named after no particular town).

Long smooth hair, black dog from Groenendael.

Long smooth hair red-brown (mahogany) with light flecks of colour and black mask; dog from Tervueren.

Rough hair, yellow; dog from Laeken.

Rough hair, dark, ash-grey (named after no particular town).

Of these six classes, only the short smooth haired black dogs are recognised by the Royal Society of St. Hubert (Société Royale de St. Hubert), which is the chief Society in Belgium for the encouragement and the promotion of the breed; but it very rightly recognises the coloured dogs also as shepherd dogs. The older Belgian breeding Society of the race, which was founded in 1891 as the "Club du Chien de Berger Belge, CCBB", with its headquarters at Brussels, which is separated from the Society of St. Hubert (because of its greater interest in Hunting dogs), and has amalgamated with the Belgian Kennel Club (Kennel Club Belge), only allows the other five varieties to count and takes no notice of the short smooth black haired dogs. A second Society of admirers of the race was formed



Fig. 154. Rough haired Belgian shepherd dog.

in 1904, the Society for the Belgian shepherd dog (Société du Chien de Berger Belge), with headquarters at Malines. This Society, on the other hand, placed itself under the patronage of the Society of St. Hubert: besides these, there are, or were, other smaller Societies of the same kind. So far as the locally named different kinds of "recognised dogs" are concerned, the result has been that all of them have flourished in their own particular area where their admirers abounded, as Malines, Tervueren, Groenendal, Laeken, which all lie in the vicinity of Brussels.

The Belgian special coloured breeds afford good examples of what I maintained above, after Schämer, about the origin of colour. Naturally the Belgian breeders have not promulgated an official decree to the effect that "From this time forth, we wish to breed only one long smooth haired variety, entirely black, or a reddish-yellow, short, smooth-haired breed". They have, however, laid much more

stress on these colours, and even now allow them only to be of importance because they appear the most frequent, for inbreeding in a narrow locality has transformed the originally wolf-coloured long smooth haired dog (by means of a confinement which became ever more severe) into first, a red-brownish flaked variety and then into a pure black variety, through a layer of colouring matter which went on increasing in density. With the rough haired dogs, it allowed the black colour to fade into dark grey and then yellow, always remaining uniform in colour; and similarly, in the Malines dogs, the wild colour fades into a pale yellow with a light touch of black, while the original



Fig. 155. Long smooth haired Belgian shepherd dog.

dark colour remained only to survive as a black mask about the upper jaw, as if retiring to an island prepared beforehand for this contingency. For the rest, the hallmarks of the race resemble those of our own. The average height from the shoulder is given as 22". Dogs with stumpy tails, and those whose ears are not quite erect are recognised as little as those which are regarded as impure from the point of view of colour and hair.

Long smooth haired shepherd dogs were first used for Police service at Ghent at the beginning of this century; this employment however, was strictly confined to security service, and did not reach the extent and standard that it did with us. The Belgian breeders

have also, after the German example, set themselves to train their dogs. They are as keen trainers as they are breeders; but for all this, they lay stress, by reason of their inevitable trend of thought, on matters which are entirely beside the point, such as external features, trivialities and circus competitions. They develop, for example, jumping powers to a remarkable degree, which however, are of no practical use, and they scarcely ever busy themselves with the all important consideration of training the powers of scent.

When we take into consideration the great popularity of the native shepherd dog in Belgium, it is not to be wondered at that the German shepherd dog was found comparatively rarely, and had no representative body. On the other hand, as a result of a close relationship with France since 1904, there was founded a special Club for the French shepherd dog (Club du Chien de Berger Français),

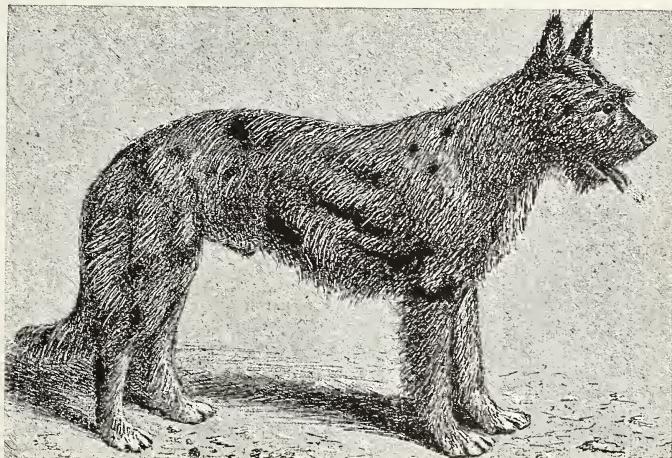


Fig. 156. Young French shepherd dog from the Pyrenees.

with headquarters at Brussels, which was also affiliated with the Society of St. Hubert.

France has a line of local breeds worthy of notice; which unfortunately have not been sufficiently studied and described. As far as I know, only M. Mégnin the Elder has studied them seriously. The Official Breeding Society of the race concerned itself with two varieties only; and very superficially at that. We find also in France the lighter built dogs in the more highly cultivated districts; and larger stockier dogs, on the other hand, in the wooded districts and in the mountains. In France these districts are still, to a certain extent, infested with wolves. In addition, the Pyrenees even now harbour lynxes and bears; and are made unsafe by the bands of roving gypsies as well. There are also wide tracts of country, which on the whole, are very much thinner populated than Germany; for example, there has been no attempt to make country colonies of

places which are only used as pasture lands. Tending dogs were therefore only required in districts which were highly cultivated, particularly in the North East where it is not very hilly, and in the Centre. In the less cultivated mountains and plains of the South and the South West, the dogs, on the contrary, are only used for driving, unless, as in earlier times, they serve only as guardians and watchers of the flocks and herds.

It would not then be so very astonishing if we were to discover in France too the herdsman's dog in his primitive form, in the variety known in the Eastern and the Southern districts. That however is not the case, it seems more probable that the Rude form in France was not a shaggy but a smooth or rough haired dog, as indeed was



Fig. 157. French shepherd dog from Languedoc or from the "Garrigues"

partly the case in Germany. Phoebus, like Columella, depicts the old French herdsman's dog the "mâtin" as shaggy haired: he apparently however plagiarises without adding anything original. In the picture on the contrary, he depicts a pure rough haired dog, (in the Magdeburg Cathedral group as well there is no trace of shaggy hair) and the big Rude in Oudry's picture of the Wolf Hunt have not shaggy, but simply smooth hair.

I have already mentioned the shaggy haired dog of the present, the shepherd dog from Brie, along with the "Old" shepherd dog variety which exists to-day. He has become a tending dog, pure and simple, and apparently has much in common with our Old North German shepherd dog stock, which, becoming smaller as it went from East to West, reached from Westphalia as far as England via

Belgium. We must suppose that the intermediate forms of the old "mâtin", in his development towards the smooth haired shepherd dogs, must be found in the large rough haired driving dogs, the



Figs. 158/160. From the life of the French shepherds in "Landes de Gascogne".



Fig. 159.

"chiens toucheurs" or "toucheurs de boeufs", which are preferred by the butchers and the cattle dealers.

The old type has survived in its purest form perhaps in the Pyrenees. The shepherd dogs of the Pyrenees are powerful, strong

boned animals, with mighty bear-like paws, rough or long smooth hair, often grey with darker streaks; they render good service as driving dogs and are chiefly successful in protecting the flocks and herds against beasts of prey and gypsies; they are also used by their equally savage shepherd masters for exhibition fights with bears. These shepherd dogs of the Pyrenees must, however, not be confused with the Pyrenean herdsman's dog described above; they bear perhaps the same relation to these as the Swiss dairyman's dog does to the St. Bernard.

There is a special shepherd dog from the South of France, from Languedoc and Provence, even as in the South West; it is the dog of Languedoc which is also known as the "chien de Garrigues" (dog of the pastures; in Provençal "garrigues" means "pastures"). This



Fig. 160.

dog too is represented as being very large and powerful and is considered as particularly sharp, because, with the exception of the shepherds, he scarcely ever comes into contact with man and is therefore very dangerous to strangers. He serves as driving and protecting dog; his colour is described as grey yellow flecked with darker or lighter spots. The communities in these districts amalgamate their sheep into large flocks which number from 10—20,000 head. One shepherd and one dog are reckoned for every 400 sheep, while the whole flock is under the control of a master-shepherd. The flocks generally remain away from home for a whole year, feeding in summer on the slopes of the Cevennes and the Alpine foot-hills; and in winter, on the marshes of the Rhone delta and the plains of the Trave.

The life of these French shepherds of the South and the South West is full of hardships and comfortless. This is shown by the three pictures of the wide-expanding heaths ("Landes") on the West coast

of France, South of the Province of the Gironde. Cattle breeding forms the chief industry of a self-contained and still retrograde population. The frequent and very marshy heaths make it necessary

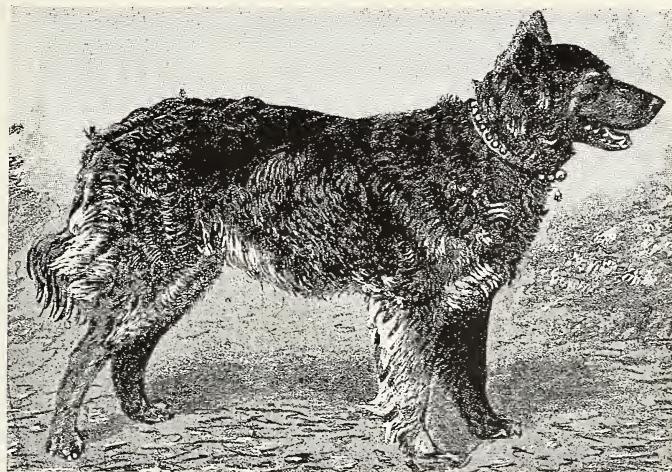


Fig. 161. French shepherd dog of the old Beauce working stock.

to use stilts, which, as our pictures show, are utilised by the shepherds as well. In such a district, a tending and warding off dog is not ne-



Fig. 162. French shepherd dog of the new Beause working stock.

cessary; the cattle driver, there also, has not yet become the shepherd. For service with the flocks, a sharp watcher is sufficient to help with the driving, and to come to the assistance of his master when he has

to deal with sheep stealers. The conditions of life are the same as those which are to be seen in certain countries in the South East, and which used to prevail among us also 3—400 years ago. The only dog in France that is useful for tending and warding off is the smooth haired shepherd dog, the "chien de Beauce" or the "Beauceron" which is the most widely disseminated and the most frequently met with. His racial marks are akin to those of our smooth haired dogs and the height is given as from 24—28". If measured correctly with the hair pressed down, this height from the shoulder is re

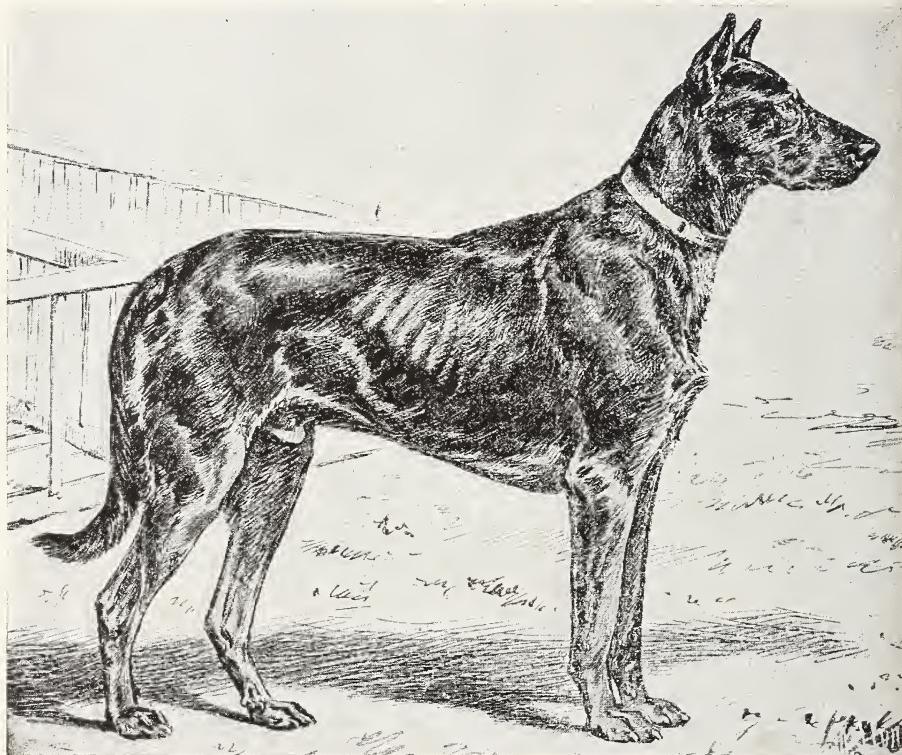


Fig. 163. French shepherd dog of the Beauce breed, fancy variety.

markable, but this measurement cannot be correct. Either the French measure differently from us with a tape measure instead of a measuring rod, or else they measure from the height of the ears; or, which seems the most probable in my opinion, they, like their national hero, Tartarin, are given to poetic exaggeration. The numerous Beauce dogs which I saw in Swiss and French dog Shows before the War, and the few which I found during the War in nowise exceeded the height of our German smooth haired dogs, but rather, when compared with our dogs, they are inferior on the average, especially

in the strength of their bones. I would regard 24" as a good average height for the Beauceron of the country stock. According to the general opinion of the French experts, the Beauceron of the fancy breed is infused with the blood of the Great Dane to give him larger size, and to impart to him the finer and slighter build of a fancy dog. That has indeed been accomplished in a few cases, but as the result, the hair has become thinner and closer, in fact too much so. This, however, need not be the result of an infusion with another strain, and I leave this also to the breeders and connoisseurs to restore. The fact is that the Beauceron of the latest breeding deviates from the earlier variety, and that too in essential features. Formerly, the dog had hair which was half-long to smooth, while now a body covering has been produced which is hard indeed, but short and without under-down. The shepherds do not welcome this new breed. No wonder!

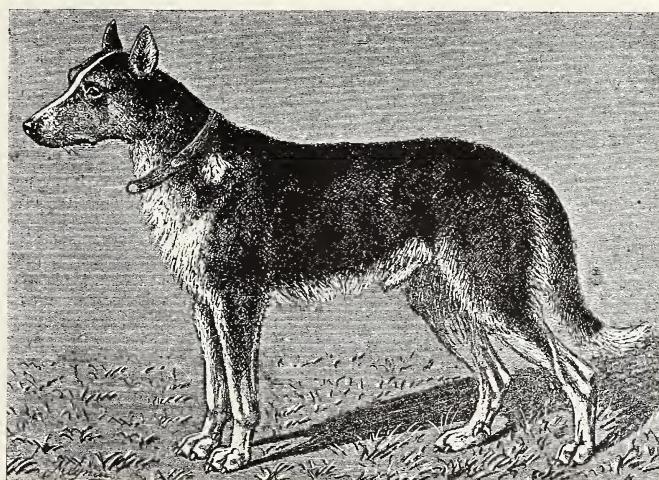


Fig. 164. French shepherd dog of the Picardy breed.

This short haired dog is not weather proof, and this, with his liability to be tormented by flies, renders him useless for work with the flocks. The French breeders, in spite of the fact that they have so ruined him, still profess to be working dog breeders, for as a fancy dog the Beauceron is rarely kept.

The old working variety resembles our South German flock working dogs in build and in general appearance; while the Beauceron of the newer breed resembles more our Dobermann terrier. When contrasted with him, however, he is found to have a more graceful, more harmonious and more even body build, and a nobler head. During the War, these dogs were very seldom found in occupied territories; I saw many more shepherd dogs of the old breed which are still good, with naturally erect ears.

It is remarkable that the ears of the Beauceron shepherd dogs are invariably cut short although they would become erect without this artificial means; especially as the breeders set great store on this feature. This is true generally of the other French breeds; with the dogs of Brie, however, ears turning over at the tips are allowed, by the Official descriptions. These Official Regulations for the dogs of Beauce and Brie — for the other kinds there are as yet no Official descriptions — mention the fact that there is a sideways curl of the end of the tail. Such a side-ways deviation of the last third part of the tail is found in many shepherd dogs and in all districts. It is no mark of the purity of the breed, but merely the result of having too long a tail, which gets in the way when the dog is running and accordingly takes a side-ways or an outward bend.



Fig. 165. French shepherd dog, puppy from the Ardennes.

As a further guarantee of purity of descent and a hallmark of the French breed, they look for dew claws and even for double wolf-claws. Now it was formerly a superstition with South German shepherds that double wolf-claws imparted special tending qualities; the same may have been, or may still be believed in France. These irregular phenomena, which appear even now, can in no possible way be regarded as the regular distinguishing marks of the breed any more than the four spots over the eye, the black spots in the mouth, or the warts on the snout, on which some "learned experts" lay so much undue stress. The single dew claws are already a hindrance more often than not to the firmest "stand", and the gait of the hind-quarters; while the double ones are always so, without exception. They compel the dog, as the picture of the Beauce dog of the old

type clearly shows, to stand like a cow, and to adopt a correspondingly wide and hampered gait; they also result quite often in damage and severe bleeding and should, on that account, be eradicated as early as possible, which could be done easily and without any possibility of danger.

The Beauce dogs have the same foundation colouring as our, and all shepherd dogs, i. e. the colour of the wild dog,— a fact which is not mentioned in the Official descriptions in France, — they are most frequently black with the familiar yellow, or red distinguishing marks; they are also pure black, reddish yellow (sandy), grey, and grey with black markings. White is only allowed as a star on the breast. The black dogs with yellow markings are very prettily called “bas rouges” (red socks). South German shepherds who formerly accompanied sheep that were to be sold in France, and most often came to Paris, adopted this name from their French comrades, and it degenerated into “barusch” or “parusch”, which they certainly often used as names for them, as well as for dogs which were coloured differently.

In Picardy, in the North of France, there appears a smaller kind, indigenous to the district, with shoulder height of about 22", smooth haired, with good shepherd dog build and appearance and a unique colouring: black and white. The foundation colours are interspersed with a tan to a reddish coloured stripe; similar indeed to the dairyman's dog, and some Scotch collies, which Strebels connects with the similarly many-coloured Iceland dogs. It is not, however, to the point to attribute this incidence of colour to cross breeding, although it may be admitted that the Iceland fishermen may have brought such dogs with them. This range of colour is well within the scope of the shepherd dog family, as explained before.

In Eastern France, on the Belgian and German frontiers, in the deserted and wooded mountain districts of the Ardennes, and the Argonne as far as the Vosges, and stretching also into Belgium and Germany, there is still to be found a heavy dog, which, by his build, is recognised as belonging to a mountain variety; he often has a stumpy tail, and he is known as the dog of the Ardennes. In the Department of the Haute Marne, he is much prized as a boar hound on account of his sharpness.

The dogs of the Ardennes and of Picardy, and certainly the stronger rough haired driving dogs (Bouvier) used to be employed by smugglers on the Belgian-French frontier. They ran at nights, with the goods to be smuggled wound or otherwise fastened round their bodies, unaccompanied, fighting shy of men, going from frontier village to frontier village, where they were sure of good treatment and careful attention from the receiving agent. To combat this smuggling, the frontier officials likewise trained dogs, whose duty it was to drive these smuggling dogs to them. Generally speaking, shepherd dogs in France serve the same purpose as with us; they work in the fields and in the farm yard. As Army and Police dogs they enjoyed surprisingly little popularity before the War, while

the German shepherd dog, by this time, was being bred for this latter purpose. The good German shepherd dog had made himself quite indispensable in France among intelligent and honest admirers, who received him with enthusiasm, as a service dog. He then became as a fashionable craze, chiefly for "the crowd", from the demi-mondaine to the stock-jobber, from the business man to the inkslinger, but especially for the dog dealers; as "chien policier" (police dog) or "chien mordant" (biting dog), of one of which famous breed, everybody who was anybody must be the proud possessor, but he dared not and must not be one of those awful German dogs. At last his home was discovered to be Alsace, and the German shepherd dog was rechristened "Alsatian", "chien de berger d'Alsace" (Alsatian shepherd dog), or "chien loup d'Alsace" (Alsatian wolf hound), or simply "chien loup" (wolf dog), or "loup d'Alsace" (Alsatian wolf). Thus was the Fatherland saved, and the greatest Chauvinist might now, without danger to his feelings and his "face", drag behind him one of these noble animals; after paying a few thousand francs to a French dealer who had bought them in lots in Wurtemberg and in Baden for 60—80 marks apiece, if only they did not shrink at the report of a gun.

The importation of German shepherd dogs into France had, as a matter of fact, reached very suspicious proportions before the War. According to Official statistics 3481 shepherd dogs were imported in 1910, 3970 in 1911, and 4132 in the first half of 1912.

This demand was not a matter for rejoicing for us, — the SV had often enough taken action to prevent it, — for on the one hand, valuable breeding animals were taken out of our management, while on the other hand, this led many breeders to supply the cheaper and less valuable "throw-outs", which had a harmful effect on the good breed.

The "Club Français du Chien de Berger Français" (CFCB) has been in existence since 1890 to promote the interests of the French shepherd dog. This Society, which is State-aided, has held an annual Competition, accompanied with much bugle braying and drum banging. It accomplished scarcely anything for the working dog, and not much more for the fancy breed, and it had only a few hundred members. Furthermore, it busied itself only with the two varieties from Brie and Beauce, which latter a few years before the War, began to have a Society all to himself, "Amis de Beauceron" (The Society of the Friends of the Beauceron), and both were under the control of the "Société centrale pour l'amélioration des races canines" (Central Society for the improvement for the canine races). A branch of the SV in Paris worked for the German shepherd dog; it published its own journal in French for the benefit of its members; moreover, there existed the "Club Francais du Chien de Berger Allemand" (CFCBA), which was not free from dog dealers.

In both the Latin countries, Italy and Spain the popularity of our dog was on the increase. In Spain "La Cria del Perro de Pastor aleman", which is an extract from this book, has appeared. There is

no official representation of our dogs there as yet. I have already enlarged upon the indigenous dogs, when speaking of the herdsman's dog. In Italy there is a national Official representation in the "Kennel Club italiano", and in Spain there is "Real Sociedad Central de Fomento de las Razas Caninas en España". (Royal Central Society for the propagation of dog races in Spain.)

The tending dog in England is the so-called Scotch shepherd dog or collie; which has certainly developed from the above mentioned Cur-dog. From the excavations of relics of the dog of the Bronze Age in Ireland, it is clear that this dog was indigenous both there and in England, where their posterity, according to Dr. Caius, as we saw previously, was already employed in tending service by the middle of the 16th century. It does not seem to me to be important, as Strelbel however would emphasise, that these Scotch lads can be traced back to an importation from Ireland. They are divided into two varieties, a short smooth haired, and a long smooth haired kind, from which originated the long haired dogs so prized by the fancy breeders. Graf Bylandt also mentions the stumpy tailed collies of the short and the long haired variety as seldom met with, it is true, but none the less existing, as a regular species. We cannot deduce from this any racial distinctions in the breed, such as whether there were dogs with or without a tail; whether there was a short haired variety and a long haired variety; here we have a shepherd dog with the dog of the Bronze Age as his ancestor. In the Shetland Islands, where the dwarf horse is bred, there is also a dwarf variety of this collie.

The three pictures (Nos 166, 167, 168) give all the racial characteristics of the race. Captain Brown's "Anecdotes of dogs" which appeared in 1829, from which the early 19th century picture was taken, shows a well built powerful shepherd dog which is certainly very far removed from the present day exaggeration of the artist. The short smooth haired dog which is shown in the picture could on the whole have finer lines but has a good closely knit body. The breed, luckily for him, is less sought after by the fancy breeders; and has consequently remained unspoilt. The picture of the long haired dog, which is a prize winner of some reputation, shows how far one-sided and exaggerated breeding may go till it becomes unnatural and a caricature. The collie of the fancy dog breeder is now only bred for beauty and is kept for luxury and show; with his slender small head and overbred face drawn out into an overlong nose — (this part from the tip of the nose to the division in the forehead is much longer than the cranium, while the proportion should be the reverse). Then there is the carriage of the ears, where only the upper third of them should tip over; but must only droop over that much, otherwise it is considered a great fault — (to the fancy breeder the erect eared Scotch dogs such as are also seen to-day are villainous rogues, worthy of death), and in conclusion the hair is everything. With the fancy breeders the body build is a comparatively minor detail; one has only to look at the miserable hindquarters of the champion illustrated who, to tell the truth, in hair and nose, does not come up to the later ideals

of the fancy. The daily "toilet" — here the word must be understood in its English sense — of a collie beauty takes hours to perform; especially before an Exhibition. Before such an event, air and powder are blown under the hair, so that it may be beautifully wavy and

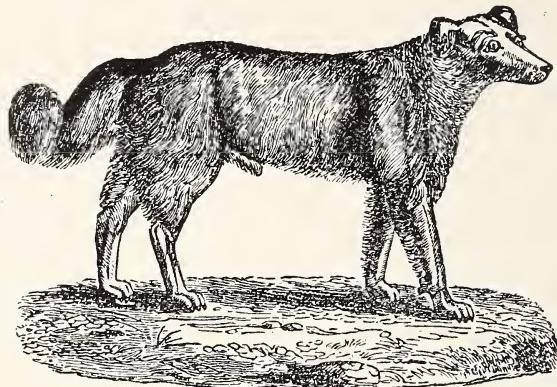


Fig. 166. Scotch shepherd dog collie (at the beginning of 19th Century).

stand up lightly and enhance the vision of loveliness. Care of the body is undoubtedly very well, very useful, and very necessary, but for a dog, as well as for a man, it should not involve the employment

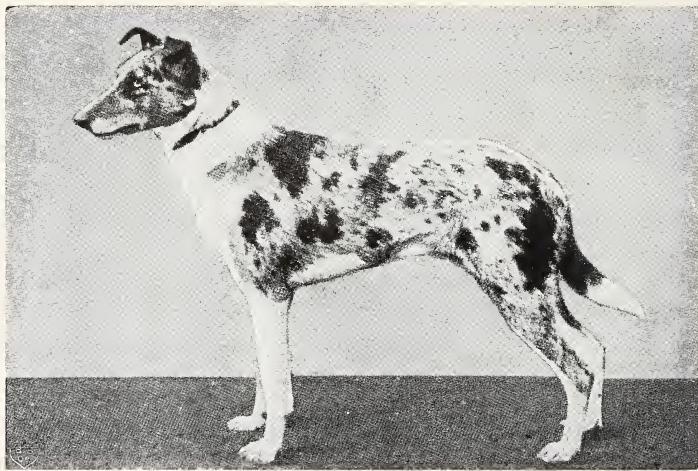


Fig. 167. Short smooth haired Scotch collie.

of such devices which are more fitting to the arcana of "my lady's boudoir", otherwise he ceases to be a dog; at the most he can only be a lapdog, which is but a poor spirited little beast. To such depths, unfortunately, the collie of the fancy breeder has sunk, an example

full of warning for us. He lives more on the good reputation built up by the yeoman services of his ancestors, which he no longer knows how to perform. That is the meaning of the vacuous appearance of the shallow, unintelligent, ant-eater-like too elongated head. To produce such a head — although the collie people emphatically deny it, and the connoisseurs are silent, while there is no arguing against the evidence of skull formation — there must have been an infusion of blood from the Russian Borzoi. Hence the narrow expressionless forehead, the long slender fancy nose, which in the case of the Borzoi gives a sufficiently strong bite, but which deprives the smaller collie of all power. The present day fancy Scotch dog with his slender needle like sharp teeth can tear very savagely and make serious wounds, but these qualities do not fit him for service with flocks and herds; and further, he lacks the strength necessary to stop and turn a stubborn sheep.

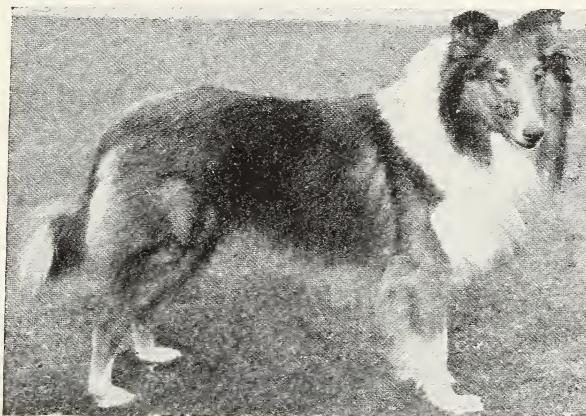


Fig. 168. Long haired Scotch collie, winner at Exhibitions at the beginning of this century.

The dog which is contemptuously described as "the peasant collie" by the admirers of the fancy dog, i. e. the working dog of the shepherd has not the over-developed long and silky coat of the exquisite breed. His rough coat is more nearly akin to the ordinary smooth hair, his head is more powerful and he has still a good typical shepherd dog expression. The tending qualities of the Scotch collies have earned for them a high reputation. Some people would rank them more highly than our own shepherd dogs; but that is already out of the question, for there is no possibility of a comparison. The manner of tending is quite different over there from that which is customary in our own conditions of service. Therefore the work of the Scotch shepherd dogs throughout is quite different from that of our own shepherd dogs. One therefore may not say that the quality of the Scottish shepherd dogs is superior or more thorough than that of the German shepherd dogs or vice versa. On the contrary, it must be said each dog

in his own way works perfectly, but neither can replace the other. The collie often works alone, tending without any oversight, because wider pasture lands are available for the sheep. Warding them off from the allotments is not necessary. His sphere is one of comparatively easy work which involves tending over wide distances, and never the more arduous and responsible labours in narrow districts. The principal tasks for the Scotch collie, after the orderly driving of the flock, are to keep it together on the wide pasture lands, to seek and bring back single stray sheep and — which is also to be done when tending alone — to guide the sheep to water and to resting places at certain specific hours. These are tasks which our own German shepherd dogs do as well when the need arises, as we shall see in the next chapter. The highest demands made on their abilities, however, is to ward off the sheep from the allotments and the crops; and in keeping the sheep from trampling on the cultivated fields. This is done by no Scotch collie. It goes without saying that the collie was on the high road, as in the eighties and nineties of the last century to become the German "national dog", — formerly people did not know the German shepherd dog; or they believed him to be spoilt or extinct —, and a few of the remote sheep farmers and some individual German shepherds tried to utilise the Scotch dogs on the daily round. The experiment failed every time not only because it was effected with the dainty collies of the fancy breed; though hereditary tendencies are not so easily eradicated as all that; nor only indeed was it because the "clumsy" German shepherd could not get along with the "noble" Scotch dog. But the Scotch dogs are useless on the allotments, neither have they any liking for the work there; and as with their weak teeth they have no grip, they could not assert their mastery over the sheep. When the sheep press towards the crops, then the collies gave way; if made keen by the shepherd, they tried to turn the sheep by running and barking. The sheep, however, did not keep from the crops for all this; and it only made the flock restless. Our shepherd had no greater success with the offspring which resulted from crossings with collies; from everywhere came the same cry. The collie fanciers tried to blame the incapacity of our shepherds for training for this lack of success, but the reason was naturally to be found in the fact that the collie possessed quite different talents, and partly in the fact that he no longer possessed, as a race, those qualities which had formerly belonged to him. The "SV-Zeitung" in 1903 published an article on the tending acticities of the collie and reported on their timorous efforts at the competitions of the SV. It may also here be noted that the "Deutsche Verein für Sanitätshunde" (German Society for Red Cross dogs), founded in 1903 which tried to work with Scotch dogs for the first twelve years of its existence, and even employed working dogs imported from their home, gave the same unsatisfactory reports about them, but their endeavours met with immediate success as soon as they substituted German shepherd dogs for the Scotch collies.

From the very fact that the working collies are often found alone, it follows that the "shikar" instinct, which is in every dog, must

have been almost completely suppressed, and such can be the result of breeding and training. The other explanation which is often heard that the "nose has been bred out of him" is naturally false. The sense of smell, which is the chief sense in the dog, will not allow itself to be suppressed by breeding, but a passion may be eradicated even if it is closely connected with the nose, such as the hunting out of the track of the game. It is generally quite possible that the Scotch shepherd collies are inferior to other shepherd dogs with regard to the sensitiveness of smell because the olfactory nerves have a poor chance of development in small faces. On the other hand, as it is necessary for the collie as a cattle dog to have good sight, it is not altogether beyond the bounds of possibility that he hunted by sight if the "shikar" in him had not been suppressed as I said before.

There are several Societies in England for the Scotch sheep dog, which are under the patronage of the English Kennel Club; the first founded for them in Germany was called "Kontinentale Kollie Klub", and formerly was very influential. The Kontinental Kollie Klub was followed later by the "Verein der Kollie-Freunde" (Society of Collie friends); the first disappeared a long time ago, and the second during the War.

The German shepherd dog was met with in England before the War only in very small numbers, and those too were of very moderate quality. The strict Laws against importing dogs from abroad drawn up with a view to preventing rabies was a bar to any real development. Our breed was therefore very little known on the other side of the "Canal". Now, however, it is quite the reverse: the English have already, during the War, and especially during the period of the Occupation, had opportunity enough to get to know the German shepherd dog and to appreciate his worth. It would, however, be of just as little service to the German shepherd dog as it has been to the Great Dane, or to the dachshund, if British fanciers should adopt him in the same way. In spite of the fact that the English are such clearheaded and far-sighted breeders in the domain of working animal breeding, (which, thanks to their great experience, has brought forth such excellent results), and in spite of other favourable circumstances in regard to dog breeding, the English breeder — who is too subservient to the latest craze — has always emasculated the working races, because he has never bred in a sound and intelligent direction, and cannot keep his eye off external features, which are merely incidental or which are even peculiarities. Something so unnatural and therefore so grotesque as a bull dog, for example, if we leave China out of the question, could only have been bred in England. Those cold calculating hard-headed business men cannot understand the soul of the shepherd dog. That our dog is now going over there under the name of "Alsatian wolf dog" is most probably but a transitory result of the War.

I have already remarked on the attempt to improve the German shepherd dog breed by infusion with Scotch collie blood. The progeny of such unions very quickly disappeared once more from the working

stocks. The fancy breeders, however, have only made one experiment with a short haired collie bitch; and they were never tempted to renew it. Such crossings cause no damage to the German stock, because it was a matter of dogs that were nearly related. They must, however, be useless, in spite of the fact that the Scotch collies have had a longer intense breeding than our own dogs. They are useless for working purposes, because, as we saw above, the qualities of the collie, being different, are not such as fit them for the requirements of our tending service. They are useless too for the improvement of the body build of the working dog. The fine lines of the head of the collie serve no



Fig. 169. *Algerian watch dog, "Chien de Douars".*

useful purpose for a dog that must be able to lay hold. But for the body build!!! On the average the Scotch collie is smaller and weaker in his bones, but the hair concealed these slendernesses and all the bodily deficiencies, and allowed the dog to have a handsome appearance.

As with the Scotch collie, our working dogs, especially in the border lands, have, of course, been bred and crossed with shepherd dog stock of the Continental countries across the border; this was a result of the wandering sheep flocks and the sheep traffic which formerly was especially active from South Germany, Hungary, and Upper Italy towards France. The offspring of such unions are no mongrel breed, because it is not a connection between dogs of a different

breed and use. Although they remain without significance for the race, they are useful from the point of view of the Stud Book.

It still remains for us to consider those families of the shepherd dogs which belong to Continents outside our own. We find, next, in North Africa, and in Algeria a dog, which in build, expression and nature is quite different from the other indigenous dogs. Studer considers, after an examination of the skull, that this Algerian watch dog, the "chien de Douars" belongs to the shepherd dog family. As remains of the dog of the Bronze Age have not been found in the present home of this dog, he was probably imported there at a later date, and then, for the first time became indigenous. The obvious



Fig. 170. Consignment of watch dogs for the Cameroon plantations

thing to do is to date this importation to the coming of Attila's hordes. The present day protecting and tending dog of the Kabyle Settlements would then have come first with the Vandals, the old German tribes from Germany, via France and Spain to North Africa. There he still leads to-day the life of our former Hovawart (farm watch dog). He is a most excellent and trustworthy watch dog who defends the single hut, as well as the settlements, with courage and ferocity against the stranger. The picture (No. 169) shows such a dog, who belonged to a Hanoverian family and lived there as a fully accepted member of the household. He resembles in all respects the middle sized variety of the German shepherd dog; this similarity is acknowledged by all who have had occasion to observe these dogs in their native country.



Fig. 171. Flock of sheep on the "Klein Nouas" Wool farm, South West Africa.

Further on, towards the East in Egypt, we find especially, a highly esteemed and trusted watch dog on the Nile boats, the "Ermenter" dog in large quantities. He is very different in build and nature from the pariah dogs in his area, and is described as a large powerful and rough haired dog, resembling the shepherd dog. Sketches of old Egyptian dogs show the differences very clearly; but as they exhibit nothing corresponding to him, he must accordingly have come later on. Perhaps he came as the indigenous dog of Macedonia with the Grecian armies of Alexander the Great. Strelbel would have us believe that he came with the armies of Napoleon, at the end of the 18th century as a French driving dog (*toucheurs de boeuf*), and was left behind on their return.

In the German African Protectorates, East and West, the German shepherd dog was naturally widely diffused. He was a trusty watch dog in the yards on the Plantations, he was useful even for hunting large felines, and was also employed as a Police dog, and finally, was used by the large sheep breeders of German South West Africa for service with the flocks as well. That our shepherd dog could well stand the tropical climate and retain his power of scent and could breed, Pechuel-Lösche already informs us in his book on the German Loango Expedition (1874—76); for he found flourishing progeny bred from a pair which had been imported six years previously. In the Cameroon Plantations, the "Westafrikanische Pflanzungsgesellschaft Victoria" (The Victoria Plantation Co. of West Africa) employs German shepherd dogs. Dr. Esser of Berlin reports about them in the "SV-Zeitung" as follows. "The shepherd dogs are successfully employed to keep the Plantations clear of the free roaming cattle, goats and sheep. The dogs have a wonderful talent for patrolling without control the entrances and the roads. They scent intruding animals at a great distance and drive them out. In the daytime they leave the native workers unmolested, but at night they seize every banana, indiarubber or cocoa thief, regardless of consequences. While up till now, every other dog that had been imported had lost its sense of smell, and had become sick and useless, the German shepherd dogs had remained as vigorous as ever in their own homes."

In Asia, in the North, there are represented, as we saw, the different Laiki varieties of the shepherd dog; but further research must determine the exact extent of this; the same holds good with the dogs used in Middle Asia, which may resemble the shepherd dogs, or even be of the same original family. In former German China, the German shepherd dog was naturally found too as a Police dog.

When we come to America, the smooth haired Mexican herdsman's dog, (for whose picture I am indebted to Frau C. Damm of Durango), must be described as the indigenous dog of Central America. House dogs were found with the aboriginal inhabitants, when America was discovered. They have been traced, in the same way as their canine relatives in the Old World, from a wild dog family, probably from the medium sized American wolf (*Canis lupus Occidentalis*); and hardly

from the small and weak jointed prairie wolf or coyote (*Canis lupus latrans*). They could quite possibly have been brought in, however, with the first settlers who came out of Asia over the isthmus into the New World. So far as I know, a detailed examination of their skulls has not yet been made and the question of the origin of this dog, who at anyrate has been indigenous to America from ancient times, has not yet been made quite clear. The Mexican herdsman's dog which can be found in the South as far as Peru, has from short to long smooth hair; in colour he is mostly yellow with dark brown patches. He is represented as a sharp lively dog, devoted and courageous but prudent, and is valued as a most trustworthy watcher; he exhibits genuine shepherd dog characteristics.



Fig. 172. Rough haired Mexican herdsman's dog.

Among the dogs that have been imported into America from the Old World, our German shepherd dog has been strongly represented lately. In South America, planters and stock owners, especially in Argentina, have imported him. In North America, in the United States, the dog fancy has taken him up with great enthusiasm, for the best of reasons that he was a good business proposition. In 1913 the "German shepherd dog Club of America" was founded, and in the beginning of 1914 held its first special Exhibition in New York, under German direction. It also produced an abridged translation of this treatise in English and commenced to issue its own periodical. Because the demand from the United States was ever in excess of the supply for the fancy breeders — and the troublesome conditions for importing are doubtless a matter of congratulation for our race —

the French wholesale dealer seized the opportunity, came to an understanding about these difficulties of importing, and knew how to introduce the rubbish which could not be sold in Germany and in France, which he proceeded to do under the description of "French police dogs", which were foisted on to inexperienced and therefore uncritical dog-lovers.

In conclusion, the Australian shepherd dogs are an importation. Sheep breeding is carried on there on a large scale. Tending and warding off dogs are not really required in those districts; attentive driving dogs are quite sufficient. There is a difference between the smaller and short haired Barb and the larger smooth haired Kelpies. The Scotch collie dog, who on account of a distant resemblance of



Fig. 173. Australian shepherd dog, Kelpie breed.

protective duties would be quite suitable, is not esteemed by the Australian shepherd, who use a hardy and reliable working dog. On the contrary, sheep breeders, after being acquainted with the exceptional aptitude possessed by our dogs, have imported German working dogs.

There is a great uncertainty regarding the past history of the Barbs and the Kelpies. The Barb may well be connected with the small Old English sheep dog, which is principally used as a driving dog. In the case of the Kelpie, a crossing with dingo — that is with wild dog — blood is asserted; which probably is a fairy tale similar to that of the close affinity between the present day German shepherd dog and the wolf. Considering his build and expression, the

ancestry of the dog could be attributed to the short haired Scotch collies, with as much show of reason as to any of the other shepherd dog families. The dog shown in the picture was a winner at one of the great Competitions organised by the New South Wales Society of sheep breeders. By means of these Competitions, a very high standard of requirements was set up; among which we may notice that the ability of the dog to work alone with a few sheep was most prominent there; sheep must be driven by the dog through and over a number of obstacles, and finally be loaded on to a railway cattle wagon made ready for that purpose.



THE NATURE AND SERVICE OF THE SHEPHERD DOG

"Know what your work is and do it."



The only way to understand and estimate the nature of the dog is to be able to grasp the significance of the stages of his evolution. Such a task requires a sympathetic, dog-loving observer, who tries as far as possible to enter into the innermost mind of the dog, and who will know how to short-circuit, for the time, all his purely human points of view. Whoever is not prepared to do this, but will only draw conclusions from the eminence of his own particular human point of view, will obtain a distorted picture: for him, many a characteristic will always remain alien, and even perhaps altogether repugnant. To such an one, the dog, above all others, can never become a comforter in times of solitary anxiety. Show me your dog, and I will tell you what manner of man you are.

For Humanity at the present time, especially for the townsman, cut off from the country as he is, the love for the dog is a tangible expression of that which is the last connecting link between us and our instinctive constant yearning for Nature, our original home. On this account then, just for that very reason alone, the German is a real dog-lover, for it is part of his nature, as R. H. Bartsch says, to enter

into the spirit of the Aryan mysticism, which makes us feel at one, interiorly, with clouds, trees, lake and heath, and with all living creation. The Teuton and the Slav, these two branches of the same trunk, which, perhaps just for that very reason, are so grimly at feud with each other, but which, however, if only united, would be invincible, go to make up a perfect harmony, because they are supplementary to each other and share this love of Nature.

From time immemorial, the German was an animal and a dog-lover. This appears even in his religious beliefs, for the eagle and the wolf were dedicated to All-Father Wotan, King of Battle-fields, Bestower of Victory, and Incarnation of Meditating Mentality. On his shoulders sit Hugin and Munin (Thought and Memory), his two ravens who whisper into his ear all that they have discovered in their flight; while Geri and Freki, his wolves who roam the battle-fields, crouch at his feet, and are cared for by the Lord of the World himself. That is why, according to Fr. Bley two stones with basin-like hollows were erected to the right and the left of the ancient altars of sacrifice, from which poured the blood of the sacrifice which had been offered in honour of Wotan, so that his wolves could feast on the entrails of slaughtered enemies. In this manner a warlike, victory-loving people, like our German forefathers, honoured the valiant enemy, even if he were an animal.

Such an adversary was the wolf. "Welf", "Wolf", "Wulf", and "Ulf" were names which were in common use among the old Germans; either alone or in conjunction with other appellations. At all times, the bearer of such a name had a reputation for boldness. The highest honour that could be paid to the wolf was his elevation to a place in the suite of the highest deity. When they bowed the knee to adore, it was certainly with the intention of propitiating him as well, for we know from former times that the capacity for discovering and driving away of evil spirits, with which the wild dog was credited, led first of all to his domestication. This attribution to him of such supernatural powers was accompanied by a certain dread of the possessor of such secret power, whose favour therefore must be courted. The wolf, furthermore, was supposed to be related to the Evil One, Loki, the brother of Wotan, god of the Air who was the Fire-king, and as such, though beneficent, was yet destructive, and who in later traditions, was related to the Evil One. He begat with the Giantess Angurboda (The Panic-striker) Hel, the Midgard Snake, and the Wolf Fenris who later on became the destroyer of all things existing — this prototype of the Bolshevik Government which is so subversive of all Law and Order — who when the dusk of the gods came, snapped his chains, and indeed brought about the end of the gods, who had become guilty in their gold-lust. Formerly the curse of the gold fell upon the German gods, but now, red gold, its accursed fruit, has betrayed, ruined and destroyed even Germany itself. Once more has it happened, even as the old Saga says:

"In the Eastern forest sat the enemy,
And there created and begat the wolf."

If on the other hand, according to the old wives' tale from the North, the ancestry of the various kinds of wolves is derived from this union of Loki with the Giantess, these legends then which are the inherited and sure remembrance of the people, go to confirm what up till now had not yet been fully established by the excavations in this territory, i. e. that there existed formerly also in the North, (as had been supposed when speaking of the domestication of the dog), other kinds of wolves alongside of the genuine wolf.

In popular belief, Wotan's wolves later on became dogs in remembrance of the taming of the free roving wild dog, which with this Nature-folk was still a common practice. As dogs then they followed in the train of Wode, the wild hunter, who under the influence of Christianity was reduced to wandering and howling over the world in the thunderstorm; until, finally, as the world came more and more under priestly influence, only one ghostly hound was loosed from the pack, which was generally a huge black dog with big flaming eyes, whose lot it was to tread its ghostly way to the crossroads, the ruined castle and the haunted places. Thus the circle is complete from the animal who first performed the service of ghost-layer, (because it was keener-sighted than man), and recognised and drove off the malignant spirits, till he attached himself to the service of the god, and served him in turn, when he finally, in company with his master, became a malignant spirit himself.

How highly the old German Law esteemed the dog of the flocks and the herds has already been shown in the First Chapter. Among the Burgundians, whoever was caught stealing a lime — or a greyhound must kiss the hindpart of the dog in the open market-place, or pay a fine of seven shillings. It is not hard to understand how the warlike proud German held in high esteem his courageous hunting comrade who helped him in his struggle with the rampaging wild-ox, the destructive boar and the greedy beast of prey. This dog of his, who was also a courageous watcher, guarding the flocks and herds, took care of the farm yard, and played his part in the fights at the waggon-lager. On the other hand, it is no more difficult to see that if a servile submission did not please the proud independence of his master, it would not be long before the dog would in jurisprudence, become the means of degradation and an instrument in the punishment of the guilty. To carry a dog was considered a heavy punishment for freeman as well as for noble until well within the Middle Ages. To be hanged on the wild heath between two dogs was an aggravation of the disgrace of capital punishment, because it stripped the victim of all but his shame. Murderers of relatives were sewn up in a sack with a dog and drowned. But whoever had a relative that had been killed by a strange dog and demanded the full amount of the penalty money from the owner instead of the half, obtained his claim, indeed, but was compelled to have a dead dog hung up over his door, which must remain there until the last bone had decayed and fallen off. If the dog was previously removed or if another entrance to the house was used, the money penalty in

full was to be returned. This was the enactment of German Common Law, according to the ancient Northern Model. This was the legal point of view by which our forefathers punished covetousness with ignominy. Finally, to pass on to a man a mangy dog instead of an agreed payment was a mean notification of the termination of the contract and a challenge to fight.

G. von List wishes to trace out the origin of this dual position of the dog from the grammatical meaning, saying that the often-used form of invective has nothing to do with the essential meaning of this word, or with the living animal, but is connected, even as the ignominious punishments, with the decaying of the dog's carcase, which comprehends the idea of restraint, destruction, oppression and decline; whence also "to go to the dogs" means to sink down to the most absolute poverty.

Be this as it may, speech took its form in harmony with the feelings of the people and this consciousness included also the dog. It treasured and prescribed certain of its peculiarities and it despised others without concerning itself as to whether it were right in its judgment or not. This disregard has shown itself in the manifold use of the word "dog" as a term of invective. Along with "dog" we find, as something especially serious, the words "false", "cowardly", "treacherous". The South German "Hundekerl" ("dog of a villain") generally corresponds to our "Schweinhund" (pig of a dog), which under all circumstances means a very common fellow. At all events, we use it when we wish to describe the peculiarities of humanity which are the most remote from the dog, such as lying, betraying, slandering and usury, and the meaning increases in intensity till we come to "verfluchte Schweinhund" (confounded pig-dog), which, on the other hand, may be used as a term of affection, and can even imply appreciation according to the tone of the voice and the circumstances; just as the expression "Himmelhund" (heaven dog), which can be traced back to the train of Wotan, and also "Windhund" which has not an essentially evil meaning. "A cynical disposition", "not fit for a dog", "a dog's life", "a dog's den", "dog cold" (beastly cold) are again very unpleasant things. There is a very definite meaning attached to "dog tired", and one most obvious to "dog-like fidelity" which has nothing to do with doggish fawning or a cringing attachment. The same holds true in other languages of the people of our race, and it is remarkable how often the dog is represented among the many pet names derived from animals which a demonstrative affection bestows on the loved one and its children.

I have already said above how much the wolf had to do with the making of our old German names. We also find represented here the names of other animals that were consecrated to the service of the gods, such as the eagle, the boar, the swan and likewise the mighty bear; but the dog stands nowhere as patron. In the names of old families we similarly find a frequent resorting to the animal kingdom, but very, very seldom to the dog. I know only one old Austrian family, the "Hunde von Kuenring" (dogs of Keuenring) and the

"Rüdt von Collenberg" (dog of Collenberg) belonging to the Knights of the district of the Neckar, whose name stands in relation to the dog. The dog is also very seldom found in a Coat of Arms; the best known instance is the Crest of the Hohenzollerns, where there is the head of a lime hound, growing out of the helmet, the ears being diagonally quartered white and black. In allusive Coats of Arms, so far as I know, only the just mentioned Barons Rüdt von Collenberg and the Swiss Counts von Toggenberg (Togge = Doge = Dog) carry a dog; and in the case of the Rüdts it is a white rough haired shepherd dog with a spiked collar, resembling somewhat the old Rude form. The Counts von Kesselstadt (Kurtrier) have a dog supporting their Coat of Arms, their device proves that they go back to the dog and the dragon, which is the other supporter of their shield. The Reuschenbergs of Westphalia, further, have dogs on their Coat of Arms, and the Counts von Buhren, Bieren, or Biron, the later Dukes of Courland, who also came from Westphalia, can be mentioned as having dogs (which might just as well be wolves) to support their Coat of Arms. Finally, a few towns such as Sorau and Hailigberg (Switzerland) carry the dog in the municipal Coat of Arms. According to von Wecus, the dog in a Coat of Arms means that the bearer was originally the leader of the "Hundertschaft", which was also called "Huno", "Hunto", "Hundt", "Hund", "Hunne", "Hun", or "Hon".

The circumstances of the life of the dog among our forefathers were similar to those among the ancient Greeks, who derived all that was best in belief and thought from the North. The seed which they had thus received was able to blossom forth at an early date, under favourable conditions, into flowers of a higher order in the realms of Art and Mental Culture. Greek artists erected statues to the dog, Greek poets and writers lauded his courage and his fidelity; and yet, the word "dog" was considered as a term of invective. In ancient Rome as well, and in Assyria, Babylon and Egypt the dog stood in high esteem. Not so with the ancient Jews however; with them the dog was "accursed", therefore a part of the later and present day contempt and hostility of the Aryan people for the dog can be traced back to the great influence of the Jews, which in Christian times somewhat altered itself and preferred to act in a manner which was skulking and therefore typically Jewish. In the Old Testament we scarcely ever find the dog in the service of man; on the contrary, more often than not we find him mentioned in a way that makes him hateful and accursed. That this could be the case even in the oldest relics of a genuinely pastoral people, as the ancient Israelites originally were, (mention being made of the herdsman's dog only twice and that too incidentally) is at anyrate an indication of a lack of sympathy between dog and Jew. It could be attributed to the very old feeling of fear and hatred which this unwarlike, pastoral people had for the wolf, and naturally for his successor the dog, and by reason of which they cursed him as the spoiler of their goods, treating him thus in a manner quite unlike that of a hunting folk who were both warlike, and knew how to respect their enemy.

I said that the distinctive characteristics of the dog could only be explained from the process of his evolution. We will begin with the characteristics which we have described as part of the nature of the dog and which appear to us as the most eccentric; through which however, he first became true dog, and in virtue of which (with the exception of the horse in certain instances) he, among all the domestic animals was able to rise to a higher stage, from which he graduated to become family companion, guardian, helper, fellow-campaigner in hunting and fighting, and even the friend of his master. The apparent slavish temperament which makes the dog cringe at the foot of his master and lick the hand that thrashes him and the foot that treads on him may indeed be repugnant to the upright man, and may even instigate to hatred those that are not upright, because they see their own despicable qualities reproduced in him. The ancient Greeks, in whom the habit of prostration before the ruler which was so common in Asia Minor, was entirely wanting, called this cur-like adulation "proskunesis" and held it in contempt as a thing unworthy of a free man.

With the dog however, this behaviour can only repel those who take a superficial view, and base their judgment on such investigation; but not those who go deeper into the subject, and who enquire into the kind and the origin of this behaviour. If we trace it back, we shall doubtless arrive at the nature of the wild dog and its taming. The mother must guard the wolf whelps from their own father, for the young of the beasts of prey remain helpless a long time, and are at the mercy of the care or the neglect of the older and more powerful members of the same species. When they come into contact with such, they must beg for their favour and goodwill. When a whelp betakes himself to them, he shows signs of suppliancy, he twists and doubles and whines, lays himself on his back and places himself entirely at their mercy. To prove this, one has only to observe once how a young dog will behave before an old Rude. The same is also observable in times of love making and courting; with the large dogs, the idea is to overcome the shyness of the bitch; with the bitch, it is to excite the strong one, but also to implore consideration, when finally his right as the dominating male is acknowledged. This then is for the dog the primitive expression of the demand for indulgence and love. Is it therefore to be wondered at if such inherited characteristics were also shown towards the stronger human being, especially the man, when the wild dog was tamed and domesticated, when it remained and even confirmed itself in its new position? As the house dog to-day has devoted himself to man "with heart and hand", so does he give expression to this devotion, according to the dictates of his nature, which is only comprehended by an understanding love and which indeed must be received in the same spirit in which it was given.

E. Schlaiker has given a wonderful description of this touching submission which is part and parcel of the dog's innermost soul, where he says:

"I know no animal which, in its sentiments and sympathies, is so tender and intimate as the dog, or one whose moral characteristics are so strongly developed that one must in this respect indeed rank him higher than humanity. There are few among us who can surpass him in fidelity and unconditional readiness to sacrifice himself. How often has he not risked his life, not only for his own master, and that of his master's relatives but even for strangers. When he sees a loved friend grieve, he grieves with him and knows how to express his sympathy in the most tender and tactful way. Nothing can be more touching than the dog when he gazes with grief-stricken eyes upon his grief-stricken master, and tries to comfort him with a most gentle stroking with his paw. Where too could one see the expression of such pure and sincere joy as in the dog when he once more sees a beloved member of the family after a long absence? Schopenhauer calls the dog "the greatest conquest of man"; and it says a great deal for us indeed that we were able to win such a friend. It is, however, unfortunately, much to our condemnation that we use his name in a hateful way for hateful things."

"When a man is really accursed, despicable, cowardly, and a "lick-spittle", we call him a "dog". From whence in all the world do we derive the right to do so? I know naturally that the dog, when conscious of a misdeed waits, grovelling on his belly, for the punishment of his master, but the fact that his moral impulses are so highly developed should indeed not be set against him as a sign of degradation. People say that he kisses the hand that chastises him. That is true. Even a good dear child kisses his father and begs his pardon after being punished for some wrong that he has committed. Whoever has brought up children knows that it is just in such moments of contrition that they can be especially intimate and dear. Yes; but the dog receives from his master an undeserved beating as well. Granted that this does happen, yet in spite of it, his behaviour is often pathetic and puts the man to shame. His need of a master is so great that he will never oppose him, when once he has become his master. This, however, would only be a fault, if it were founded on inherent cowardice, but the dog on the other hand is brave, generously brave, heroically brave. There are probably mischievous, ill-mannered, violent and snappy dogs as well, I don't deny it; but I would advise nobody to administer a punishment, however deserved or otherwise, with a whip, for dogs will see themselves damned before they submit to it. If bad dogs only had been in the world, the word "dog" would hardly have degenerated into an insult, for our delightful human race has a most tremendous respect for teeth which are ever ready to bite. When, however, we meet an animal who knows how to risk his life for others, regardless of consequences, and shows such natural fidelity and goodness that it replies to injustice only with silent supplication, human brutality accepts this as a challenge; and a proof of this brutality is that we have allowed the name of our best friend to become a term of insult."

Lovers of Humanity and faithful as they are, the noblest thing which dogs have to place at our disposal has developed from the highest moral characteristics, which they had when wild, I mean from their mother-love. This mother-love transferred itself from its own offspring to that whole community which granted them protection, shelter and food, as I have already mentioned in the First Chapter when speaking of its taming. Their fidelity to home and master is also a surviving result of their power to protect, and their courage in defence, which is a characteristic of the pugnacious animal which stands by him to whom it has attached itself; which trait is clan-fidelity in its origin. The talent for watching, however, takes its origin, as we saw, from their habit of guarding their nest, and from their envy of the food of another, both of which qualities make them keep away strangers and even relatives from their own home and hunting grounds. I have already mentioned in the First Chapter how, then, from the talents of the wild dog, when in contact with human society, the characteristics of the domestic dog were developed, and how those which fitted him for service with the flocks and herds were encouraged and made permanent.

"Cowardice", of late, has been asserted as a common characteristic of the nature of the domestic and the wild dog. This is untenable, because it is a criticism based on a purely human standpoint, which in the case of certain wild dog races, as for instance the half-parasitic jackal, may perhaps hold good, but this too, just because it is a very loose generalisation, which takes in a very wide compass and overshoots the mark. Hyena dogs, according to Schillings, are not brave enough to attack the large species of antelopes which possess a very dangerous weapon in their long and sharp horns, but not only attack children, but grown-ups as well. The like can be said of the Indian and the Alpine wolf. The genuine wolf, however, not only surpasses the aforementioned animals in size and strength, but also in ferocity. Self-preservation is an instinct in every nature, and such foresight can never be called cowardice, all the less so when other more powerful instincts such as hunger and love are able to suppress it. When the animal avoids unnecessary danger, especially at the hands of the stronger, and flinches before man with his far-carrying cowardly weapons, that cannot be laid to his charge as "cowardice". With the domestic dog, fidelity is aroused in him to whomever appeases his hunger; in love, however, only the very degenerate are not reckless, naturally with members of the same race and kind. The question of cowardice can then only be dealt with and settled from the standpoint of the dog; but shyness, which is something different is a result of faulty upbringing and breeding by man. To get the better of the craven which is found in every living creature by exposing himself deliberately and of set purpose to danger is only possible with men, and with those too of high moral attainments. Only with man can we speak of real cowardice, and unhappily in this case we are forced to speak of it often enough; there are sufficient poltroons in many places.

Our shepherd dog, however, must be no disorderly swashbuckler, no senseless brawler, which stupidly rushes forward and immediately bites and holds on as some races do, or like to do. His calling has educated him in such cases to act deliberately also. He chooses the place where he will seize, whether opposing a stubborn ram or attacking an adversary of some other kind, and he understands how to deal with such enemies, and to keep them in their place till he can seize them in a favourable moment. This is the art of war of a superior kind, to which he knows how to adapt the means at his disposal, and where necessary, he attacks without hesitation and thought. The place which a genuine shepherd dog guards, firm and upright on his four legs is well protected indeed. "I warn the curious."

The quality of watchfulness has developed itself from the above mentioned habit of self-protection, which is nothing else but the result of the need felt by the dog for guarding himself against hostile influences in the outside world. All that creeps and flies on the earth, even the plants in their own way, are watchful in this sense of the word and must be so. We find alertness everywhere, from the very earliest beginnings in the protozoa of the mono cell till we come to the highest perfection in organisms which have developed to the cellular state, where here it is the task of the senses, the smell, sight, feeling, and taste, each one for itself and in its own way, as guardians and warners to acquaint the whole organism of whatever menaces and attacks.

Just as here in individual animals, the faculty of watchfulness is exercised by certain definite parts of the cellular state, so in the herd, which is the animal state, this is effected by certain individual animals. Large animal communities, when occupying a country, know and perceive the warning signs of animals of another breed. In the country of the steppes we find the zebra with his sharp hearing, and the antelope with his keen sense of smell surveying the wide field in company with the ostrich. The rhinocerus and the buffalo, sharp of smell and hearing, but nearsighted, rely on the services of the wood-pecker, a bird whose best sense is his sight. In the Indian jungle, the animals rely on the shriek of the peacock, and in the innermost recesses of the wood, on the warning cry of the jay or of the blackbird. Watchfulness is but precaution, it implies a correct appreciation of all that danger means, and must, as a consequence, result either in an attempt to ward off the peril or to withdraw from it. This latter can be effected either by swift flight, a cautious slinking away, or by motionless crouching on one spot, relying at the same time on the protection afforded by a natural camouflage, and the shelter provided by the surrounding district. The former can be effected by resistance where it is demanded by the prospect of any special advantage, — prey or mate, — by the menacing of the whelps, or, when required, by any animals who associate together, or by members of the same race.

Watchfulness at first is selfish, but defence, which is a consequence thereof is, however, so far as it results in protecting others,

the beginning of love for one's neighbour. This developed itself from the parents, in the first place from the mother's love, which is the result of the habit of guarding the young, and which is so necessary for the preservation of the race. We already find this habit of protecting the young among the lower animals; and the exercise of this mother love develops as the family of the race ascends in the scale. The beutel-mother (pouched family, or marsupalia) casts out and chases away her young; but the mother who suckles her young protects and fends for them. The instinct for parental sacrifice is extended to members of the same race, but is seen only in mentally higher developed forms of life in the gregarious animal kingdom and the animals capable of defending themselves, who are beasts of prey but here only (with the exception of the lion in certain districts) in the dog, the large kinds of apes, and the powerful plant-eaters.

When primitive man adopted the dog as a watcher, he was on the right path; he had already found keen witted warners in sufficient numbers, but none other who was prepared to look after and to stand up for him. To obtain this result was possible only by domesticating the dog, who recognised in the company of man that he secured himself and his home when he had a master whose property he watched and guarded.

Watchfulness and the habit of defending are found specially strongly developed in the shepherd dog, thanks to his evolution, but in him it is genuine watchfulness, not a senseless yelping; he gives tongue and deals with the situation only when the necessity arises. Where would our shepherds be, if the dog they chained up under the cart at night wished to announce every re-echoing step on the high road, and every noise from the distant town? The origin of the habit of watchfulness and powers of defence explains also the fact that shepherd dogs are sometimes reported not to show themselves watchful in a new place. In a strange town with strange people the dog has no one for whom it is his duty to care. He recognises danger, obviously as in his old home, but whom is he to inform here? He is on the lookout for himself and is ready to encounter it, and therefore must not make any noise; his watchfulness must not give any voluble expression. That he will only, do again after he is fully accustomed and feels himself at home once more.

All the other mental and moral characteristics of man in their beginnings are found already present in the animal. Scheitlin has expressed this very beautifully. "The whole animal is in man, but the whole man is not in the animal", and this has to be accepted not only in the good, but also in the bad sense as well; universal depravity which is found in man is a thing apart from the animal. We dare not then be puffed up when we regard the matter from this point of view; at the most, we can only dare to pride ourselves on the relation which they bear in regard to Humanity. That sympathetic and much experienced depicter of Nature the poet, H. von Hoffensthal who was cut off, alas, too early in life, has given a wonderful description of the indissoluble bond which unites the soul of man and animal

in his "Maria Himmelfahrt" (The Assumption of our Lady). "Every animal", he says, "has something in common with us, and bears some relation to us, and like us, has its path to tread, and its bright and its cloudy days". The Old Testament had already recognized this bond, for we read in Ecclesiastes "For that which befalleth the sons of men befalleth beasts; even one thing befalleth them: as the one dieth, so dieth the other; yea, they have all one breath; so that a man hath no preeminence above a beast". Scheitlin's arguments become the more persuasive if we compare them with Haeckel's basic Law of the History of Evolution (which I have often quoted in Chapter One); according to which, every being, from its beginnings and during its career, recapitulates in an abbreviated form the whole history of its species; and that too, not only in regard to its physical development, but also in the moulding and the cultivation of its mental activity.

The most radical wing of the investigators in the field of the mental activity of the animal denies any such higher activity for it; and would trace back this manner of life merely to a haphazard selection, thus making the animal a barren machine. They rightly warn us against any erroneous humanisation of the habits of animals that have been investigated; and yet they make the same mistake themselves in investigating and deducing proofs from the merely human point of view, without being able to identify themselves with the feelings of the animal world. That is indeed specially difficult, for we know so very little of the animal world, and certainly often come to wrong conclusions in ignorance, particularly when well-established human principles are employed to explain facts of the animal world which have been insufficiently ascertained, instead of vice versa. In the case of dogs, a correct observation and investigation of their interior life is doubly difficult, because their world is built on a foundation of different concepts from ours. Our seat of thinking is in our eyes; that is, our treatment of things is chiefly influenced by the sense-impressions caught by the sight; but the dog essentially thinks through his nose. This is just the very sense that is almost atrophied with us, and which works, when it manifests its activity at all, almost unconsciously for the most part, and is probably directed chiefly towards sexual relationships.

Scheitlin also says "The psychologist of animal life is born not made". The savant is as little suited for this task as the investigator in his laboratory; especially if he be no lover of animals. The soul of the dog has already reached too high a degree in many cases for experiments to be made with it as with inferior animals, such as birds, mice etc., because dogs have had too close an intercourse with man for thousands of years, and have received too much from him. Such scientific experiments, although valuable, must therefore, in the case of the dog, only lead to adverse sophisms, especially when made with no accompanying knowledge of, and without taking into account, the soul of the dog. This is the case too when investigating in the domain of psychology; we must have, not only the necessary para-

phernalia, but that still higher and more important asset, an inborn sympathy for the task in hand. Whosoever is lacking in this, will go no further than his laboratory and will only arrive at an over-estimation of these "purely scientific conclusions", and an under-estimation of the soul of the dog. M. Wandt utters a warning when he says "the belief in Science is the superstition of our time".

The late psychologist from Frankfort, Herr Edinger knew the right way very well, when he first asked me for a shepherd-dog bitch for the purpose of his investigations; and then, after spending a year over the investigation, wrote an account of his experiences. In his treatment of his subject, he gave numerous examples of its acute senses and the activity of its soul. But the unscientifically trained dog lover will be wrong in the conclusions drawn from his investigations, and will often overshoot the mark. He should therefore abandon such conclusions and take all the greater pains accordingly, by means of trustworthy and incontestable observation, to lay the foundations and accumulate information for the scientific treatment of these questions which are so highly important also for the breeding, keeping and working of the dog.

In his "Welträtsel" (Riddle of the Universe) Ernst Haeckel, one of the leading spirits and foremost investigators of Nature has written "the conviction that a large part of the animals — at least the higher mammals (those that suckle their young) — have a spirit capable of thought and consciousness even as man, dominates the field of modern Zoology, exact Physiology, and Monist Psychology". Edinger also allows that the dog has "intelligence"—naturally in a restricted sense — that is insight and consciousness in his behaviour, with which must be combined a certain power of reasoning. He writes thus "the extremely suitable and often ever-increasing struggle of the higher mammals to attain their goal, even if it is not "adulterated" with human intelligence, exhibits such indications of intelligence, that I am inclined to believe that there is something of the mental life."

Haeckel explains the driving impulse of the animal ("instincts" which are by no means alien to man) as the habits of the soul which were gained by adaptation, transmitted by inheritance and fixed through a long line of descendants. He declares further that alongside of the already inherited instincts, new experiences, (new adaptations of the soul of the animal), can be inherited and that in this way new inbred habits are successively developed, which first had to be acquired by the ancestors of the animals. In this connection, Haeckel includes the talents found in domestic animals, acquired by inheritance for the discharge of certain definite duties, which at first were trained into their ancestors; especially the tending habit of our shepherd dogs. Liepmann expresses himself too in a similar way when, after the example of G. Bohn, he describes these habits as an embodiment of partly simple, partly compound, partly inherited and partly acquired activities which are all regulated by the different

and more or less transmittable characteristics of the particular living beings in question.

Adolf Koelsch, who can base his observations on a large number of investigations, made by himself and others, has again recently supported the theory of the inheritance of mental characteristics, inherent or acquired.

P. Kammerer proved conclusively that acquired characteristics could be transmitted, by explaining and demonstrating on animals and plants the occurrence of such new inheritable hall-marks, which in Science is known as "Mutation". These "mutations" are the result of the endeavour of the creature to respond to the interferences with the normal conditions of his life. According to Francé, they appear, especially after years of unusual weather conditions, after settling or wandering in a new home and consequently in new circumstances of life, and finally in the process of domestication. In the case of animals and plants, already domesticated, they represent an adaptation, and even a transmittable adaptation to new conditions of life. Francé sees in this proofs of the inheritability of newly-acquired characteristics, (which give an idea of all that a living being is and can do), and of the experience and the work of its ancestors which thus become the keystone of the development of the Universe; and he further describes the process of adaptation as the result of the work of the constant and orderly association of the world in its constituent parts.

Professor Bastian Schmid of Munich no more agrees with the strongly disputed standpoint of the radical wing of these investigators than do the aforementioned-scientists, although unfortunately in these latter days, some dog trainers have thrown themselves into their arms. The conciseness of the conclusions of their principles may have induced them to such a course, for they dispense the supporter from the duty of thorough investigation, and permit of the formation, of an easily intelligible body of teaching on the subject, which, however, is often inapplicable, because the formulators lack real contact with the animal. According to Schmid, the failure of the animal to recognise the moral consideration of its actions distinguishes it from human beings, who are rational, and morally responsible for their actions; further, the animal acquiesces without reserve in a succession of primordial feelings, dispositions and singularities which, more thoroughly developed as they are than in mankind, tend only in the direction of self-preservation, but already show the first indications of some affinity with Human Nature.

It is a matter beyond all doubt for everyone, and each of us, who is capable of introspection, can establish this as a fixed principle out of his own individual experience that, generally speaking, our Human conduct is regulated not only by conscious and direct acts of the will, but also, and in an equal degree, by a thousand different kinds of actions of which we are not conscious, or of which we have only become conscious after their commission, and which are instincts born in us or acquired. We need only mention the involuntary shutting

of the eyes at the threatened approach of anything, the tendency to recover our balance when stumbling, all the movements of the hand or of other parts of the body, so obvious to us in all our actions, or indeed anything, up to the actions of crowds committed on the word of command, in virtue of which we speak of "mass instinct". According to Schopenhauer, the "submerged tenth" in the gutter has "eyes and ears, it is true, but not very much more, and they, above all, are very poor instruments for forming a judgment, and have besides only a very short memory". The events of the last years have taught us most poignantly the truth of this saying.

It is an axiom that the soul of animal and man are similar to each other throughout till they reach certain stages in their development, — "Soul" is considered as the sum and expression of all the vital functions which proceed from the brain and the spinal cord, — and that only a difference of degree can be established, and never one of fundamental essence, if one accepts the teaching of anatomical dissection and the investigation of the phenomena of life. The former shows that the composition of the brain among the higher mammals is substantially the same as that with human beings. The latter shows us that the same is the case with regard to the conditions of consciousness. Finally, this fact also speaks for itself that as dogs can be sick in mind, they must have reached a high position of mental development.

Edinger includes under the name of primitive brain the spinal cord and the little brain which are the extreme points of all the nerves which record the impressions of the senses and regulate all our movements. This primitive brain, which exists in all vertebrate animals, receives its impressions and responds through suitable actions; it works so mechanically that it can be said in advance, when it alone exists, what the animal will do in response to a certain given impulse. This primitive brain came to be dominated, in the course of the evolution of the vertebrate family, by the new brain whose operation alone makes the animal appear to have a soul, because it has the power to regulate and influence the activity of the primitive brain. The new brain attains its highest development among the suctorian families and here too in very different degrees within the several orders, and families even in the formation of its layers and furrows. The principle part of this large brain is formed by a thick grey surface layer called the "cortex", which in the case of the dog is about $\frac{5}{8}$ " thick. Here other fields are situated alongside the sensory fields which serve to associate the conscious actions. The most important of these fields are those which lie in the front part of the brain in the lobes furthest away from the sensory field. Among the mammals, the lobes of the brain have increased very appreciably in size and quantity in proportion as the animal has acquired the power to direct its observations and its reasonings after examination and judgment. Or, we can say on the other hand, that a class of animals has become more mentally endowed, and has acquired a greater understanding along with the increase in size of the lobes of the brain. Here we can leave Edinger

and recollect what I said in Chapter One with reference to the remarks of Studer on the difference between the skull of the wolf and the shepherd dog, i. e. the somewhat strongly pronounced vaulting of the forehead in the skull of the shepherd dog, resulting from an increase in the area of the lobes of the brain, which was seen to be distinctive of the dog family and which increased the mental capacity of the domesticated dog as compared with the wild species.

Dogs know very well the connection, in simple circumstances, between cause and effect; and can order their conduct accordingly; which assertion can be proved every day by one who keeps a dog. The dog knows who gives him food and water, and when his feeding dish is taken up, he knows that he will be punished when he would like to lie and rest on the forbidden place — the sofa or the bed. He knows the signs of good and bad temper in his master; he tries to back out of it when he sees the preparations for what to him is the rightly distasteful bath, he knows how to perceive what will generally occur by certain signs — the clothes for instance — and whether he will be taken out, or whether he must remain at home. My old, very sharp Mira von Graffrath (formerly von der Krone) 112 HGH, whom I shall mention frequently later on, had run away from her former owner, when she was about eighteen months old, and had since then led the real hardy life of the wild dog; during which time the shots of the annoyed huntsmen often enough rattled about her ears. Later on, whenever a shot was heard in the neighbourhood of my property, she fell into a rage, pointing in the direction of the shot, but at the same time with her tail between her legs, as a sign that she considered that the shot had been fired at her. The bitch which I have at present, when I let her loose for the first time, as soon as she saw the pond, which during the war had become overgrown with duckweed, went in, had a ducking, and retained an unpleasant recollection of it. When the pond was frozen in the winter, she could not be persuaded to walk on the ice, although in other places she used to follow on the ice without hesitation; but when at last I enticed her on to the dreaded pond the spell was broken. This power of arriving at correct conclusions makes training more difficult to a certain extent as it is necessary then for the teacher to outwit his pupils by ways which are ever varying. A shepherd dog soon finds out that he cannot be otherwise than obedient when led on a leash; even as he understands that the painful small shot from the catapult which hit him when he is not well-behaved came from his trainer and that it is high time to remain quiet by him when he begins to search in his pocket.

Man is indebted to his power of expression, i. e. to the advanced development of speech, for his surpassing and unchallenged position. We find the basis for this power of expression to a certain extent among the animals, while among dogs, (who by themselves already occupy a high rank, and have been raised still higher through intimate intercourse with man), it has attained to quite a considerable position. Just as man, the dog can express the various sentiments of

the soul not only through the voice, (which according to Hardeland, is especially capable of variation among dogs, thanks to the length of their vocal chords), he also speaks through his eyes, through the altering expression of his face, through the carriage of his ears, and finally through the tail, which by reason of his lack of arm- and hand-motions serves as a more reliable "barometer" of the soul for the expression of every variation of feeling.

According to Edinger, the dog has not only learnt to understand a certain amount of our language, but has also, above all, learnt to develop the gestures which he used in intercourse with his companions till they became intelligible forms of "sign-speech" to further cement his relation with man. He uses also loud utterances to make these more expressive, as well as the well-known whining which he employs when his silent wishes are neglected, that he may convey them more vehemently. If we pay attention to children and young people in love, we shall find the same kind of expression. I should further like to remark in this respect that, when the dog has thoroughly learnt the significance and meaning of certain spoken words and sentences — one dog learns more, and another learns less according to the schooling they have had while associating with human beings — he generally pays less attention, (especially in everyday intercourse as compared with the round of duty or work), to the actual word spoken than to the sound of the words themselves. K. Brand accordingly tells us in a very beautiful description, how sharp the dog is when on duty in looking out for the actual word of command. When sometimes while talking to him, the shepherd, in order to test his dog, used the word "oats" without any special emphasis, the dog who was resting by the side of his master, immediately stood up on the qui vive ready to ward off the sheep from the next field of oats. Edinger gives us similar information as the result of the observation of the bitch which he had for this special purpose. The working dog is trained to be very smart on the word of command, but he learns to understand very much more beyond it, if only his master will take the necessary pains with him. Dr. Fr. Schmidt of Stralsund informs me that his Nixe von Stralsund 5233 PH, for example, when he says "water", she will immediately go into water; when he says "eat" she will eat; and that when he brings forward quite unsuitable objects such as paper etc. and says "drink", she makes the motion of drinking; when he says "chair", she sits herself on a chair and when he says "carriage" she jumps into the carriage. When told to "speak up" or "say then", she barks, and she cries and whines when told to "sing". The dog can express to us in a manner quite intelligible all the emotions that are at work in his soul, and he can draw very fine distinctions between incipient feeling, strong emotion and irrepressible passion. He exhibits to us the consciousness of his well-being, his joy, his love, gratitude, longing, even ambition and pride, curiosity and attention, ardour and passion for hunting, high spirits and a lust for fighting; and on the other hand, unwillingness and indifference, sorrow and pain, consciousness of guilt and shame, jealousy and envy,

mistrust, indignation, hate, terror and fear. Through his voice, the carriage of his body and dumb show, he knows how to express all these emotions; the eye further corresponds to each one of them, which is still more emphasised by the tail.

The dog knows how to abandon himself to the predominating feelings of the moment; on the one hand to those of friendship; on the other hand, to those of jealousy, sadness, indignation or fear. Joy is made apparent through the bracing up of the whole body, the flashing eye, the elevation and the wagging of the tail, by romping and racing round with short yelps and barks. Docile, submissive, the muscles relaxed, a personification of surrender, the dog comes to his master to beg for, and to obtain a petting. All subdued, he seeks the hand of his beloved master to kiss it, which is the very highest proof of affection that he has to offer. Darwin explains this as something which has been transferred from mother-love, which is the very highest emotion of the soul, to the master; and that just as the mother busies herself unremittingly to lick her pups, to keep them warm and clean, and to stimulate their digestion, in a word to cherish them with all the love of which she is capable, so too does the dog, so full of affection, change over its mother-love and care, and uses it as a means of expressing its devotion for its master, who, after its offspring, is its dearest and best. Sadness causes the ears and tail to fall, the deportment is lifeless, the gait is flagging, and the reproachful gaze with which he gazes up towards his master completes the impression already made. When on the watch he stretches his whole body taut; all the muscles are in tension, the ears erect and pointing. Often when he is ready to spring, the fore-leg is half-raised; when he does not trust, or is in a rage, the hair on his back bristles like a brush. The ears are laid back so as to give the adversary no possible hold; the lips are drawn up so as to leave free his teeth, which are his menacing weapons of attack. The erection of the hair on the back is intended to increase his size, and indeed to raise himself as high as possible, and he settles himself in his limbs, especially in his fore-quarters, as steeply as possible, so as to appear as formidable as he can to his adversary. This sounds as if we were talking about a person, it is true, but what happens is the result of pure instinct which from constant exercise has become an inherited habit. We find the same everywhere throughout life; whatever is small, feels itself to be small, cringes and seeks to humble itself; the courageous dog on the other hand that feels himself to be equal to his adversary, seeks to increase the impression which he makes on his adversary and to inspire fear by erecting particular parts, by the alteration of the expression, by the tone of his voice, or by the showing of repugnant colours. It is even so with us men when the "lust of battle gleams from the eye". Savages paint themselves in glaring colours, and decorate themselves with ornaments high on the head, when on the war-path. Our forefathers wore a fur with gaping jaws or the horns of an animal over the head. The helmet which was used later, was intended not only to protect the head, but to make the wearer appear larger and more formidable; and so it

went on till in more recent times we have the high bearskin "busbys" of the Napoleonic and English guards, with the Prussian Grenadiers, and some high shaped cavalry helmets. Fright, again causes the dog to put his tail between his legs; the body contracts, remains without power of motion, and recoils. Fear completes this position, the dog begins to tremble, he loses, more or less, all control over his muscles and so, in the highest degree of anxiety, he loses all control over the organs of excretion. This is often the case with pups, and although it disappears later on more often than not, it remains with some bitches for the whole of their life ("wet bitches") and this is then, especially in the case of the older Rude, an unmistakable indication of faulty, rough treatment, of beating, and of a weak disposition.



Fig. 176. The joyful welcome; after Professor B. Schmid and the painter Petersen. (by kind permission of the Verlag Ph. Reclam jun., Leipzig.)

With reference to the meaning of the wagging of the tail, I will quote the words of Fr. Th. Visches in that book of his which is the result of the most sympathetic observation, namely "Auch einer", where he writes, "When we think that every wagging of the tail of the dog expresses a contented and well meaning disposition, when we observe how often the dog wags his tail; what a soul is that for a dog, full of interior joy and full of love for us. How much kindness passes through his soul during the long, long, day"!

It is a rare sight to notice how with some dogs the signs of a "guilty conscience" are exhibited, and how like a child discovered in the act of some naughtiness, he seeks to hide or even to make atonement for his fault by a double-distilled sweetness. Another will protest his innocence, and "lies", a third on the other hand will try

to make himself scarce at the first opportunity, and will come without being called, when he thinks that the atmosphere is once more clear. One is indeed heartbroken, but with the other, not even the cloak of penitence can obscure the face of the rogue.

How well do our friends know how to express their wishes and needs. When a dog jogs him gently with his muzzle, and then points to the door, when his owner is deep in his work, and overlooks his growing unrest, he means "I must leave the room". By running to and fro with his tongue hanging out, by scratching in front of an empty water bowl and by standing in front of, what to him is an inaccessible, drinking place, another will show that he is thirsty. How eloquent are the eyes of a well brought up dog, who in the consciousness

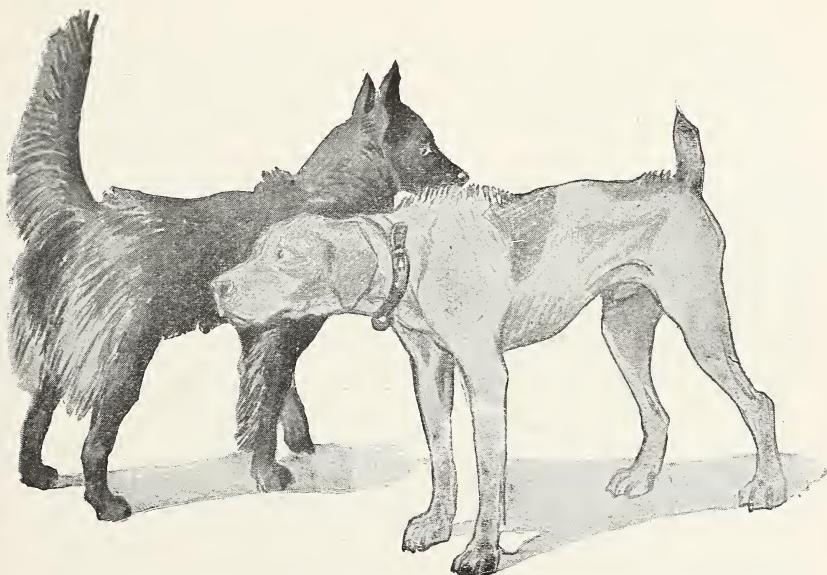


Fig. 177. Mutual mistrust, ready to fight; after Professor B. Schmid and the painter Petersen. (by kind permission of the Verlag Ph. Reclam jun., Leipzig.)

of his duty, knows how to suppress his own inclinations, how soulful is the expression with which he conveys the sense of his joy and of his sorrow to his master. I had a bitch who cried out, when every movement wrung a groan from me on a painful bed of sickness. Another who was a most willing and trustworthy childrens' nurse, cried when her charges cried. The Rude in love knows how to implore his master in a manner full of expression "Oh do take me near her". Truly indeed, some dogs are almost unbearable in such cases, and yet, with it all, it is the highest natural instinct of the very proudest feeling, even if unbounded and uncultured, to which the Rude gives expression when he thus indicates in his own fashion that "nothing counts more with a man than the love and the preciousness of a woman".

The voice of the dog is very well adapted to the expression, interpretation and accompaniment of such sentiments. The sound of the bark with which he greets us with great pleasure is quite different again from the stormy clamour of the dog in need, and different again from that of the scolding or complaining dog. He shows the purest and most infectious joy in his greeting after a long absence, a joy which appears to show in a crescendo the need of relating what has happened during the period of separation. The bark of the watch dog is sharp and short, but he lets us know, notwithstanding, by his tone whether he announces a friend or a stranger. Furious, and at the same time complaining, is the sound of the bark of the dog, who, for example, makes much ado about a hedgehog during the night; while warning and menacing is the challenge of a dog who withstands an enemy, or is on the point of attacking him.

Every dog keeper knows that among all the different notes of the dog, especially in the lower notes, there are various sounds resembling human speech. They have naturally

no connection with word or speech in spite of the fact that several years ago the hunting dog "Don" went on the stage and begged for cakes, which he was always prepared to do before a very gullible and not very intelligible audience. Somewhat different again from these "speaking" dogs are the "thinking" dogs who be-



Fig. 178. At his ease.

fore the War began to compete seriously with the calculating horses. The terrier "Rolf" from Mannheim started a fashion. Several reading circles for dogs were formed in which an ever-increasing number of lady adorers took part. It is not to be wondered at if the minds of these ladies' "little darlings" wandered over the same range of ideas as that of their owners, that they composed verses and knocked and knocked, — but not with the usual object with which the dog does such a thing, namely his tail, but with the much less appropriate paw —, which is the result of a mutual mental adaptation of fellow prisoners extending over a period of many years. But seriously, these "revelations of the soul of the animal" which have been vouchsafed to us through "Rolf" and his like are on a par with the phenomena of Spiritualism, when their female supporters (like their spook-believing sisters from the "table-serving", I mean "table-turning" Societies) favour us, out of the abundance of the outpourings of the soul of the dog with nothing better than fairy tales like "Blümlein traut" (dear little flower), "lieben Vogel hören" (listen to the little Dickie bird), romances of kisses and "auf den Buckel steigen" (an invitation to endearment on the other side), or from the insistent desire of Rolf to become acquainted with all his descendants. Think

only of this old dog-Pasha who was then either a pure white dove, or an unmitigated hypocrite and false to all the real feelings of the Rude, because he loves his offspring to eat them, (the wild dog always does so, if he only has the chance, while the more cultured and tamed dog does not dare, but only goes in wide circles out of their way). Such trash could only come from such table-rapping old maids; but everyone to his own taste, "what's one man's meat is another man's poison". It, however, entirely passes my comprehension how scientific people of other professions can bring themselves to test such animal prodigies by having recourse to humanisations of this description, instead of rather enquiring from the open, happy, and confiding soul of the dog for information about his sentiments of joy and sorrow, and



Fig. 179. The dog school of the future; the babies' class.

about matters which might bring us a stage further on in the exploration of the animal soul.

These dogs and horses tapped out the answers to the hardest arithmetical problems, which would puzzle the intelligence of educated people, unless they were trained mathematicians, at a stroke of the arm. Now according to a mathematician, the solution of the majority of these examples is said to be comparatively easy, because easily learnt mnemonics can be utilised. But by whom and how was this formula transmitted to the minds of these mathematical prodigies? Have they discovered the law of the formula for themselves? If so, they are far in advance of those races of human beings who can indeed only count as far as three, and by whom everything more is reckoned

as "much". They are also beyond all who, with the help of fingers and toes can, go as far as 20; and further, these mathematical wonders in this case have not so many fingers and toes at their disposal; the dogs would only do 4×4 with two fractions, and the horses would only go as far as four.

In the various announcements of demonstrations and the letters of "Rolf" and his like, we are not dealing with any genuine manifestation of canine power of thought, but with the human mind and its sensations. This is proved by the answers and by the carefully connected questions which are put to express the feelings of the dog. Every scholar certainly carries the impression of his schoolmaster, if he can give no adequate expression to his own thoughts, and accordingly he merely thoughtlessly chatters and repeats what has been said. I can therefore discover in these canine prodigies no longed-for proof of the power of thought possessed by animals; at the most, I can detect in them a demonstration of the possibility of the transference of human thought from man to the easily influenced animal. That the real soul of the animal is not in the least degree influenced by this thought transference and its response, and further is not an active partner in the process will become obvious from the sole fact that these learned dogs are, without exception, paragons of worthlessness. What wonderful working dogs they might have become, if only. !! We can have no serious regard for the superstition that they can pay a sustained attention to all our forms of speech and can easily understand them, even the most unusual words; but when we are asked to believe of them such things as their ability to distinguish the differences between uniforms, and to grasp abstract ideas, as for example a miracle, then not only men but even fools as well may wonder. One description of a report of "Rolf" — it is long but by no means the longest — contains ninety-five words — and in order to tap them out he must make about 2,500 signs. Here we have, a dog which taps with his foot 2,500 times one after another, and then there is only a "short interval" just before the conclusion, after which Rolf taps out that he is "terribly tired". I believe him from the bottom of my heart, for what must the poor head of the medium be like after this senseless tapping out?

These "thinking dogs" give us no real indication of their spirit, but are merely meaningless reflections of the peculiarities of their owners; and one can only see in them the usual daily proofs of their powers of mental conception, observation, and a certain acuteness of thought, which, to give them their due, are very important data for further observation and are also proofs of the high mental development of the dog. Whoever knows his shepherd dog really well, knows that our dog acquits himself to an extraordinary degree in these respects, — which are the foundation for his adaptability to his vocation, — and will be able to bring new proofs to confirm my observations. A good dog observes his master so closely that he almost knows him better than he does himself, and he must often indeed wonder that the occurrence is so rarely the reverse. He knows whether

we are in a good humour, or a bad humour, and when he will be allowed to show us his affection or must keep it to himself. He feels whether we have time for him, whether we are willing to pay attention to him, and he knows when people talk of him, and he thanks us for this notice with a light tapping of his tail. The dog, who at this moment, lies under my desk knows that he must not disturb me when I am at work, and that is hard for one of his temperament. If, however, the typewriter is not tapping and I lie back to think, and let my hand hang down, then he creeps, after a short and almost questioning wagging of his tail and, pushing a small head into my hand, waits to see if he is welcome. Hell-, — her real name is Galle von Weil 67831 HGH, but "Hell" is such a convenient name to use when calling — will remain quietly in her place and will let me walk round the room and even leave it, but if she hears, by the snapping to of my spectacle case that I am going out, then she stands up ready to spring to the door, because she knows that now at last we are actually going out into the open. The service dog which I had with me during the war, also a Hella — von der Dieboldsburg 55769 KrH — was very well brought up; she never begged and not once came to the table without being called. But when I — one forgets one's manners at the front — prepared something for her during the meal and cut off a piece of bread crust or cheese, then she would stand with unblinking eyes in her place with her mouth ready open. Was it a chance glance that disclosed what I was going to do, or was it because I stopped eating? Had she impressed it on her memory, "when master begins to touch this or that morsel which looks so appetising or savoury (the cheese) perhaps you may get a bite". I have often made the observation without being able to get behind the cause of the excitement. My old Horand (Hektor Linksrhein, called Horand v. Graffrath 1) could have no greater pleasure than to run a race with the trains which came from the mountain — those which climbed the mountain were not quick enough for him — where there was at his disposal a stretch of about 400 yards on the side of the road by a piece of ground. He soon got to know that the dropping of the arms of the signal which stood on this piece of ground indicated a free entry for, and the impending arrival of a train; if he heard the signal fall, he stormed out, and even left a full feeding dish, and ran to the starting place and set himself there till the train came. He was always in front so long as he had a free course, and he was only obliged to leave the train, cursing, in the second and very much easier half of the course.

Every dog recognises the always welcome preparations for going out by certain definite signs. It is not necessary to put on the hat or the coat, the dog knows already beforehand. For Fr. Schmidt's Nixe, the scarcely audible clinking together of a pair of keys was the recognised sign. This bitch too knew exactly the sound of the feeding dish, and became restive when it was clattered in the kitchen outside. Edinger has already remarked on the sensitive hearing and the highly developed power of distinguishing between sounds which dogs possess.

Dogs can be trained to begin a certain action on hearing a certain sound, e. g. a meal. They hear their "eating sound" not only as something distinct from other sounds, but even when it occurs in harmony with others. In districts where the sheep carry bells, the dogs can distinguish perfectly the sound of the bells of their own sheep. A dog that had been thoroughly tested in this respect would remain quietly in the room when different bells were rung in the yard outside, but he jumped at once through the window as soon as he heard the bell of the bell wether of his flock. Edinger has produced several examples of the keenness of observation and the powers of reasoning displayed by the bitch which he kept for the purpose of observation.

Captain Schnorrenpfeil has brought forward many beautiful proofs in the "Zeitung des Vereins für deutsche Schäferhunde" (SV-Ztg.) of the power of the dog to remember accidents it has sustained, and of the treatment it has received from enemies and friends, which is a perfect mine of information of the interior life of our dogs; and which unfortunately I am unable to reproduce here in full what there is only too compressed. I only wish to mention the following reports which deal with the question of fidelity. Korte, from the town of Rehburg received, a fortnight after he had acquired a new bitch, (Hexe vom Main, formerly von der Hansa 5484 PH) a letter from her former owner. She was near when the local postman delivered the letters and began at once in a very excited way to sniff at the unopened letter box. Korte accordingly laid his mail on a bench and watched to see what the bitch would do. Without being told, she took one of the letters and brought it to Korte; it was the letter from her former master, and judging by the stamp, it had been out of his hands at least 24 hours. Captain Streit of Linz on the Danube told of a dog which, while the books of his former owner, who had been dead for some time, were being packed, nosed every packing case that came into the house and gave a piercing howl; he went with the boxes on the van still howling, and thus accompanied them a part of the way, till at last he came back to his place in front of the house with his tail between his legs. Fred von der Wetterburg 14199, owned by W. Hantsche from Niedergorbitz near Dresden, while his master was at the front, attached himself closely to his mother. When the old lady caught the influenza in the Autumn of 1918 and died, the dog was visibly distressed and only recovered his spirits on his master's return. It has been proved that the dog had visited the grave of his mistress frequently in the mornings. Such occurrences are often mentioned in the daily press but most of them will not bear investigation. I was told of a case at the front where a shepherd dog refused to leave a shot-riddled trench in which his master lay buried. The discovery of the grave by the scent of the beloved one was nothing out of the ordinary for the animal who had followed him till he died. To develop and show such attachment over the grave could only be possible with dogs who had been really brought up as "one of the family". It is everywhere admitted that when suitably brought up, a good

dog will notice the absence of his master or of his relations and will refuse to eat his food from grief. A wonderful example of fidelity is given by the Minister of Pritsch-Grobitz of his bitch Petrine von Pritschen 365. He had sent her to relations in the country to be looked after. One day the bull, there, broke loose from his stall and ran round the yard. The owner, who happened to be in the house, saw with horror that his little two-year old daughter, all unsuspicous of danger, was playing in a far corner of the large yard. He immediately rushed out of the house with other helpers, and Petrine went as well. The bitch at once recognised the danger which threatened the child, crossed the yard with huge bounds and placed herself as guardian of her little playmate, and did not leave the place until the bull had been caught again and the danger was a thing of the past. When talking of fidelity, i. e. the feeling of membership with the master, we must in conclusion, mention the time when Lotti von Schondorf 60664, who lived in my house during the war and took care of my wife, did not eat the hare which she caught in the garden, in the hard winter of 1917—18, but when the door was open, brought it to her mistress while she was still in bed. "Lo" was not trained to this, nor was she in the habit of bringing anything indoors and had never been broken in to hunt; she did it of her own free will. Even so Hell, the youngest in my establishment, who immediately surprised me with her performance as soon as she came, by seeking out the eggs which the hens laid in the garden and brought them to me daintly in her teeth. Fidelity and devotion to duty can even outweigh mother love. W. Schnelle of Sorau had rescued one evening, with the help of his working bitch Biene von der Sudenburg 13422 PH, a woman who was trying to commit suicide, at the very last moment just before she was going to spring into the rushing Böhme. As he was taking her with him to a lady he knew well, she made one more attempt to fly in order to fling herself into the water, but was again held fast by the bitch. From that moment Biene did not let the woman out of her sight, and did not stir from her side even in the house of her master, in spite of the fact that she had a litter of puppies three weeks old, from she had been separated more than three hours while on duty; she went first to her puppies which she suckled when Schnelle asked the woman to go with her to the kennel. Without being told, the bitch undertook to watch the woman at night, and only went to her litter once during that period, when the woman was sent with her as well.

Every intelligent dog keeper knows how dogs express their gratitude. Those especially who must nurse dogs who are ill know the dumb gestures by which the dog expresses his thanks, and the soulful expression of gratitude for the help which has been afforded, and for any alleviation of pain is most moving. I sometimes used to lead a sick dog, which had to be kept indoors, to the front door before he went to bed; when he came in again, he used to find his water bowl in the hall and he began eagerly to quench his feverish thirst. I patiently held the hall door open to let him in when he had drunk sufficiently, and while he was drinking, he suddenly

began to wag his tail. Why? This is not his way of expressing his satisfaction at his thirst being quenched, but rather, he wishes to thank me that he has found his drinking-bowl and also that I held the door open for him and patiently waited, to which treatment he was not accustomed from me. At anyrate he tried by means of his feeble tail-wagging — the poor old fellow had not much strength to spare for this — to restore a soul affinity between himself and me. When a dog is ill, this feeling of belonging to somebody finds a more intimate expression. He feels himself most well when he is being looked after;



Fig. 180. The Guardian of the Home.

he would like to lie down close by his master, and he tries, when he feels his end approaching, to drag himself to his master with his last strength; quite different from the wild animal who seeks out the most remote place where he can die alone and undisturbed by his kind. The pains of death lead the dog with a well cared-for soul to his master; there he has been in the habit of finding help, and perhaps this time he will find it at his disposal as well. Here is the outlet for his fidelity, and the expression of the yearning of his love for his master.

The dog also knows the art of dissimulation. A conscious pretence presupposes high powers of reflection, of which the beginnings, so far as the dog is concerned, may be explained by the inherent and necessary capacity of the wild animal for employing wiles and cunning with a greater astuteness if he is to ensnare his prey. Whoever has had the opportunity to observe any dogs at all will not deny to them some traces of this as, for instance, when they wish to conceal from their master on his return home the unlawful use of the cushion or of any other forbidden place. The more awkward — or let us say the more honest ones — betray themselves by showing this aspect of humble penitence, which is a sure sign of the consciousness of guilt. This guilty conscience in the case of dogs is certainly no sign of moral broken-hearted contrition for great vileness, but then what is this in the case of children but the consciousness that they have earned a beating or the fear that they will have one? Is that not also dissimulation, if the dog who does not want to eat the morsel of dry bread, (such things used to occur formerly, but the dogs of the present day are not so spoilt), carries it about with him, till he finds an opportunity to make away with it unobserved? My Adalo v. Graffrath 2655 HGH, for example, did not like anything that is smoked; whenever I gave him in the dining-room the skin of a sausage or a piece of ham rind, he took it in his mouth like a well brought-up dog and even thanked me for it; but he placed it behind his last back teeth so as to bury it as soon as he came out again. And it was a real burying; not as he would hide some spare scraps for the time of need, as dogs do. If a piece of anything smoked was given to him in the garden of a Restaurant he immediately buried it deep without further ado...

A dog who is discovered in deceit, in a lie, or in any other misdeed, is ashamed, even as a child blushes when it is found out. He lets his ears and his tail hang down, he looks up furtively and exhibits a humbly sad carriage. Some dogs employ all kinds of little dodges to pray for fine weather; each one knows how to show his best side when he sees that the sun shines again, and that he is once more forgiven. Dogs also exhibit very plainly, by the play of their features, their embrassement when discovered doing something that was forbidden, or when they have not rightly understood their master's wishes after he has looked at them sharply, or they regard themselves self-consciously when he speaks to them. Some have their own way of expressing this embrassement; one yawns from sheer perplexity; another will lick his lips; my present "Hell", when she has escaped from such a predicament, has nothing more pressing to do than to occupy herself with her hind-quarters. Is this perhaps the beginning of sexual shame?

Abuse of the exercise of the right of the stronger is also naturally found in our descendants of the beasts of pray, especially with regard to bed and board. It shows itself with the herdsman's dogs as the will to exercise power over the flock entrusted to them and this can be wonderfully developed for their present service. In the same way we also find, as an inheritance from the robber-ancestors who were

accustomed to hunt in packs and to obey the leading dog, the capacity for submission to a master, and a desire for, and understanding of work in cooperation.

Ambition develops out of feeding and sexual instincts. Hunger and love, envy of the food of others and jealousy are the leading motives. The dog will steal a march on the members of his own family; will push himself to the fore; he will be the first in hunting and in the possession of the prey; and first too in love with the bitch on heat. This is the way of the original wild dog which still comes to light today at work and in play, and which can be utilised for service. Ambition depends on the sense of honour and shame; but of these I will speak later on. The sense of honour and of pride can be seen in its beginnings in all kinds of different little ways; the first, in competition for the favour of the master as his dogs run towards him, biting at each other; one will carry his master's stick in pride, another will carry the basket entrusted to him, the hunting dog brings the hare.

Envy is not foreign to the soul of the dog, and this is not to be wondered at; it begins with envy for the food of another and is found in the already mentioned sense of possession, that sense of "mine and thine". This occurs in all its phases mostly in highly trained dogs. The dog feels himself to be a personality among his fellows, he has his favourite place and his habits which he wishes to be respected; he has his own feeding dish and his own playthings. In this respect dogs, and especially young dogs are very particular. They watch jealously over their own stone, and the piece of wood with which they play; they lay it in a special place, they bury it even when they are tired of play, and they allow no one else to touch it. Man has understood how to utilise this sense of proprietorship in the dog, which later on extended to its home and hunting district, for his own purposes of watching. The following is an example of the way in which its feeling for the property of its master has developed, even against the members of its own family. I formerly used to have two Rude, the already mentioned Adalo "the master", and his scapegoat Kladobert von Grafrath. 5300. Both were the closest friends of the cat of the house, who availed herself to the full of the friendly intercourse with both, either as cushion or as hot-water bottle and used to bestow on them as an offering an occasional mouse. In the knowledge that loneliness is good neither for man nor dog I procured a bitch for what was at that time the empty kennel. Froda von Grafrath 9047 HGH came and naturally was greeted in a boisterous manner, and was immediately taken possession of by Adalo; while poor Klo knew very well that the Gates of Paradise would only be open to him on the quiet. To such an extent did the two Rude run after the new flame that they did not altogether trust Pussy, for, as soon as Froda came near her, they placed themselves on the qui vive against their old friend, who belonged to the house and the owner. Fro did not prove herself to be madly in love with cats; on the other hand the cat respected her, which frequently happens. My Hell which I had during the war was a fierce cat-hater, and at Laon and at the Marne she shook the life out of many

a surprised and hostile pussy. When, however, the retreat brought us into different lodgings and every day she encountered a different cat, she conducted herself toward them as a guest and always respected the property of another, which is still one more case of a sense of right and wrong in relation to the property of the master. The aforementioned Lo who caught the hare, was a firm friend of the baker's boy who delivered the bread regularly at the house. One morning when Michael came, everyone was in the cherry orchard picking cherries, but when the bread arrived they all went in to breakfast. Michael seized the opportunity to climb a cherry tree. When my wife returned with her helpers, she found Lo under the tree barking furiously, and, above in the tree, the thieving Michael who now slid down as quickly as possible and was at once seized by the otherwise friendly Lo and was none too gently handled. The rascal was never allowed, in spite of all bribes to come on the estate again, and another of his brothers was obliged to come instead. In conclusion, just one lovely story about Horand. He was quite safe with poultry; one day he busied himself in the poultry yard with his half-grown son Sigmund von Grafrath 8, when a stupid young hen, frightened in some way or another, toppled over the low fence. Naturally the silly young Sigmund wished to catch the stupid thing, but Papa Horand went in front of him, laid hold of the ball of feathers, took it daintily in his teeth and gave it to me who had been watching what had happened, without taking any active part. Horand was not so amenable with tame hares, because the poaching instinct was strongly developed in him. These he seized and killed, regardless of the fact that they were my property. He even tried to climb the steep steps to the stable garret where I had placed a hutch with the idea of saving the last few.

The idea of property goes to such lengths with the dog that many will mark it in the regular way that is observed by so many dogs. I used to have a bitch Mari von Grafrath, formerly, von der Krone 2 HGH, who after a meal used to set her "Highness seal" on her plate, in order to give it such a scent that it would be inviolable and not used by another. Similarly a grey she-wolf in the Cologne Zoo made her plate wet, and to do so adopted a very queer position. After squatting on her tail in the way that bitches do, she supported herself on her forelegs and held her hindquarters and back there, quite unsupported, till she had concluded her business. According to Löns, captive foxes also do the same to the remains of their food, which they have pushed aside for further use. Wild dog excrements are frequently found on somewhat elevated places, boundary stones, young pine trees etc.; domestic dogs also seek such places and raise themselves with many singular contortions of their hindquarters high up on corner stones, walls and tree trunks. This peculiar custom must be traced probably to a purposeful inherited habit which serves to convey information, and which in the case of the wild dog, may be a sign to determine the limits of his hunting area.

In dog life, the nose is the means of receiving information and its activities are confined to the two most important considerations,

hunger and love. In the first case, the scent is without purpose when it does not indicate a warning sign even as has been explained before; but a dog coming along afterwards can smell out from the discovered excrement and know what his predecessor has eaten, and can run back on his track and find the place where the festive board may still be laid. In the case of love, however, the scent which the bitch lets fall behind serves at the same time as a "Marriage Advertisement", and when he encounters it, the dog lets fall his contribution to it as well, which translated into human language means "keep off the grass", which for all that does not help very much, for the next and every dog that comes after does the same thing, and follows all the more if the scent seems fresh enough to him. In this way was developed the inherited custom of the dog to seek out every single upright object so that there in the open "Visitors' Book" he might find information from what served him as his daily copy of the "Times". Sexual instincts are very strongly developed in the dog family, and in the breeding time of the wild dog, which only occurs once in the year for a period of about 6—8 weeks, there is much fierce fighting among the dogs. The more mane-like hair which we find on the throat and neck of the older Rude serves as a protection of these most vital parts against such attacks. In the case of domestic dogs, the sexual instinct shows itself in all sorts of unpleasant manifestations. When indeed careless keepers of dogs do not shut up their bitches, when on heat, but allow them to roam about the street unrestrained, thereby giving the children of the town an opportunity of acquiring precocious knowledge of things which they need not know till later, and causing scandal to the old women of both sexes, this is not to be blamed on to the dog. One of the results of domestication has been that this regular breeding time has been given up. It should occur as a rule from the end of the year till within the following February, when indeed most bitches do favour this time, not a few, however, deviate, and all will get on heat twice in the year. Therefore there are indeed bitches on heat at all times, who in a place, like a city, where there are many dogs, keep the dogs waiting on tenterhooks of excitement; but in the country as well the wind wafts the sweet scent and the song of rivals over wide districts. At these times bitches are in a bad humour, irritable and unreliable, and in some cases, as an inheritance from their ancestors, this propensity overcomes them and develops into wandering; many of them at this time lose their power of seenit, as we understand it, and often refuse food. This is not astonishing in view of all the powerful changes and preparations that are taking place in their interior. Most dogs, however, are unbearable when the scent of heat is on the wind, and the best education can go to the devil when they happen on the fresh traces of a bitch on heat, and are not looked after by their owners.

We can also observe all the sins and unnatural perversities which occur in the life of the human race in its sexual relations in the animal sphere too, at least in their beginnings. The assertion that depravities are especially frequent in the domesticated species and

in the wild varieties that are kept in captivity, in my opinion, does not rest alone on opportunities for observation which are so easily available, there are other reasons to explain it, such as unnatural keeping, an easy life, and the absence of struggle for survival.

Jealousy is naturally also, in conclusion, found strongly developed in animals so susceptible to sexual impulses. It develops itself on the foundation of these sexual impulses, and is also transferred to everything that is loved, even to the master. Where several dogs of different sex are kept together, one can easily observe instances of jealousy on occasions.

I have already shown in the First Chapter that the inclination of the dog and his complete submission to man could be traced back to a sexual foundation and to a certain similarity of scent which influenced him. The dog immediately scents the sex of whoever approaches him and acts accordingly. *The dog submitted himself entirely to the man as his master:* as regards the woman on the other hand, he knows how to oppose his will to a certain extent. In this respect the more intimate relation between a master and his bitch, than that between man and dog is especially remarkable; the fact that a bitch is generally more reliable in service certainly depends on sexual reasons, because she does indeed make a greater surrender to her master, leaving out entirely her small deviation during her love period, but the sixth chapter will deal further with this matter.

It is wonderful how the dog — I am still speaking of the shepherd dog — surrenders to him who carries the most weight in the house, i. e. the master, and that is the man, in spite of womans' suffrage, and other and accordingly more potent reasons, especially woman's wiles and woman's love. Even if the dog feels himself to be "the dog", he wishes to throw in his lot with the "first fiddler" for he has ambitions. He will only render obedience to the master of the house, for when a man is in the house, he only obeys the woman with reservations. In pretended quarrels between man and wife, the dog, whatever its sex, will range itself on the side of the master, when he deserves the name in any way at all, according to the ideas of the dog. Children are objects to be protected and played with, whose little teasings he puts up with willingly out of love for the master of the house, but they have nothing to do with giving him orders; on the contrary, when there is anything really seriously the matter with them, the guardian dog comes to the fore. Some time ago when my children were still little and did not wish to break off at once from their games in the garden when called, I used to let out Audifax, and he sought them out all together in the large garden and herded them, as a dog herds lambs, carefully but inexorably, into the house. As regards the servants, the dog indeed allows himself to be fed and cared for by them, but he recognises very clearly their subordinate position in the house, and so far as obedience is concerned, he does not give in to them. A shepherd dog who sides with the servants is no longer a shepherd dog and is spoilt through wrong treatment. My Eva von Grafrath 244 HGH for example, would not allow the kennel attendant

who fed her daily, to take anything from my desk; if the maid had to carry the mail bag, the bitch at once flew at the legs of the well-known and otherwise loved friend. The bitch, which I had last in my command at the front, attached herself to me from the first moment, although to tell the truth, I busied myself with her very little. My orderly had fetched her from an official Information Office at home, had looked after her, fed her and trained her; the entire Regimental Staff spoiled her, but she only wished to be with me, whether in my room, behind my horse or my carriage. Perhaps this wish of the dog to be with the highest in command received its greatest impetus at the time of his taming; the leader of the clan, (who corresponded to the master of the house to-day), made the decisions, and delivered the verdict which meant his weal or woe, for feeding or for being fed upon. The keenly observant dog feels very quickly whether anyone wishes him well or no; indeed, he knows how to interpret the opinion of others with regard to his master, because he and his master are really one in his estimation. Certainly the experience gained from scent plays a large part; his nose tells him whether the stranger goes about with a dog and whether he is to be trusted; and men who have still preserved some power of scent receive some ideas of attraction and repulsion through the nose as well as through the eyes and hearing. At anyrate all dogs feel a repulsion for evil smelling people, though people who smell strongly of perspiration do not come into this category, but those with neglected and uncared-for bodies, hard drinkers, and above all "eaters of dog flesh". Their hatred against these cannot generally be so ancient, for wild dogs eat without repugnance a dead companion, and likewise, the half-wild dogs of the North in time of necessity will eat the dog who is killed for their meat. Their general mistrust of unkempt clothing, of chimney-sweeps and above all of those who are out of the ordinary ruck and routine, such as people who carry long poles, or those who walk on crutches, or those who walk bent, or those who talk loudly or sing, or drunken rowdies, is based on the impressions made on them by their ears and eyes. It is not easy to explain why those dogs who live in the country always have a special aversion for the postman, who takes nothing away, but, on the contrary, only brings things, and who from his regular coming and going ought to be recognised as a regular institution.

I have already explained that mother-love, which is the highest moral characteristic of the animal, developed itself into love for and fidelity to man. The elder Bechstein gives a very splendid example of mother-love and fidelity towards the master. A shepherd had taken his high-bred shepherd bitch to a sheep sale. On the way back she whelped, while still many miles from home, in a low stable, and was left there by her master to be looked after. The next morning he found both the mother and her litter before his front door. The bitch had brought the pups, seven of them one after another by stages, and thus went to and fro on the road thirteen times in spite of her weakness after her confinement. Frau Schuchardt of Celle told me of an instance of pride in her good fortune as a mother, in which a bitch

wished her master to share, which occurred to the keeper of Hexe vom Reiherpfahl 71252. One night the bitch whelped in a room specially prepared for her in the basement, while her owner lay in bed very seriously ill. The mistress was with her, but had left all the doors in the house open so that she might hear the slightest noise made by her husband. When all seven pups were born, Hexe took one in her mouth and carried it carefully upstairs to the bed of her master. After being praised by him, she brought the pup down again to the nest, so that she might make the journey again with another of her offspring.

Our shepherd bitches are thoroughly good mothers. Often enough we must be astonished at the spirit of self-sacrifice with which a bitch will offer her wounded teat again to the sharp teeth of her little one; and how, when taken away from her pups, she does all she can to come back again soon. Later on the relationship between mother and offspring dissolves quickly and entirely, of its own accord, as soon as the necessity for it ceases to exist, although in some cases the maternal attraction and care for the children is still retained. This was the case with my Mira for her daughter Sigrun von Grafrath, who remained in the kennel. When Sigrun had her first litter, Mira could not be brought away from her kennel, and without any fear she was able to be brought to the litter on the very first day, where what she wanted most of all was to lie down with the pups, and was even allowed to do this by her daughter. When Mira, on the other hand, was made to share the breeding kennel of another bitch, with whom up till now, she had been fast friends, the immediate result was a deadly feud, although she was in a separate stall. Family sentiment and love for their offspring was inherited in Mira's stock. Sigrun behaved in just the same way towards her daughter Ingeborg von Grafrath 721, and, further more, I could always instal her as a nurse for sick pups or young dogs, whether they were her own or not. So when her long-weaned and independent daughter Bruna von Grafrath 2646 had teething convulsions in the fourth month, Ingeborg quietly licked her mouth and eyes and broke up her food for her because she did not wish to eat. Another time, the pups of Ingeborg's daughter, Ada von Grafrath, for whom we had secured a nurse, fell ill with summer cholera owing to neglect on the part of their attendant. If for no other reason but to avoid all possible infection for the other half of the litter, I tried to place them with their grandmother Ingeborg, who at once lay down with the pups, who were about three weeks old, warmed them, licked them dry, and willingly offered them her empty teats and even went so far as to bring them bones. Other mothers, however, watched jealously over their litters and would not willingly allow their master near the nest. For example, during the first week or even longer after she had whelped, I only dared to push food and water for Mari through a crevice into the kennel, otherwise the bitch would go for my legs, treacherous little beast that she was, although in other respects we were on very good terms.

Bitch mothers appear to have a very sharp perception for the powers of vitality of their offspring. Various breeders have informed me, and I have been able to observe the same myself, that bitches lay certain whelps aside, — and this too in the case of small litters, and not only in the first days, — and repeated this with the same pup, when anyone laid it again in the nest, or when the exposed little one can already move about. In such a case it is done only with pups that will die, as can be proved, and there is no doubt that the mother must have scented their lack of vitality or an approaching illness. Some bitches whine loudly if one of the pups dies in the litter, and this whining is called the "death wail"; others bury those that have been lain upon deep in the hay. Once I heard a weird death wail, uttered

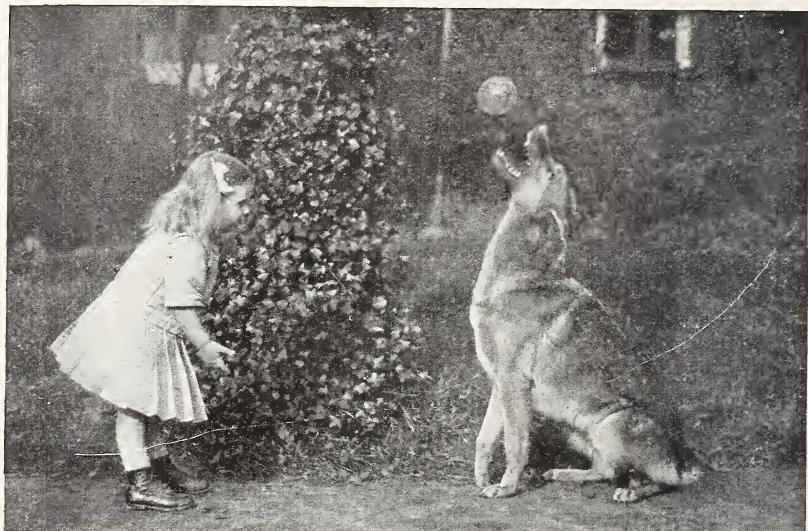


Fig. 181. Catch.

by the already mentioned Mari, when the gardener carried away from the hospital kennel her six months old daughter who had died from pneumonia. I do not wish to decide whether in this case it was a question of grieving over her daughter, or a general sympathy with the fate of a sister member of her race. The bitch transfers her love for her own offspring in a cordial way to the children of her master. Mari's as well as Mira's favourite place when in the open air was near the perambulator. There was never a more reliable children's nurse to be found than that child-crazy Mira; she cried when the children cried, allowed nobody, even old friends, to come near them, let them do what they liked, but never allowed them to leave their playing place when they began to toddle. In fact, I cannot remember a single shepherd dog who was not in love with children. They were always

conscious of their power and of their duty to protect them, and even in their fights with them, they will never draw blood on purpose. Some dogs will do their utmost to get near children in order to play with them. Thus my old Freia von Grafrath 7, who was a splendid catcher, always strained to get to the children when playing ball, to catch the ball from them, and was accordingly always greeted with shouts of delight when she appeared on the childrens' playground at Holensee. What I shall now relate is, no doubt, the result of protecting activities exercised over those confided to their care — the gift that they have for this has been still increased through their service with the flocks — : in the Sanatorium of Dr. Görlitz at Frauen-dorf near Stettin, there lived a paralysed officer whom the Doctor



Fig. 182. Two yearlings.

had ordered to take certain walking exercises in the park. The Doctor himself supervised this, and the patient used to support himself on the Doctor's arm, and carried a stick in the other hand, which later he could do without. Dr. Görlitz' Moritz Excelsior 60102 was always present at these exercises. One day the Doctor was called away during the walk, and the officer tried to continue by himself. The dog, who on the command of his master, had remained with the officer, regarded his efforts for some time, and then, — without receiving any order, — ran into the house, coming back immediately with the patient's stick. Dr. Görlitz expressly assured me that in this case the dog had acted entirely on his own initiative.

The relation between dogs kept in community varies greatly, and changes according to the characters of the individuals. A new

arrival is at first always greeted as an intruder and with great mistrust, and the greatest care must always be taken in such cases until the newcomer has either created a position for himself, or is satisfied with that allotted to him by the others. Of course dog and bitch in such cases always get along in the most friendly way, and really happy marriages can often be observed. Even in cases of polygamy they get along very well, for the dog rushes among his quarrelling harem and keeps the peace; just as an older dog will act with regard to younger dogs when quarrelling. Horand and Freia, with whom I began my shepherd dog hobby, about twenty-five years ago, were such a happy pair; she was always glad to look after her

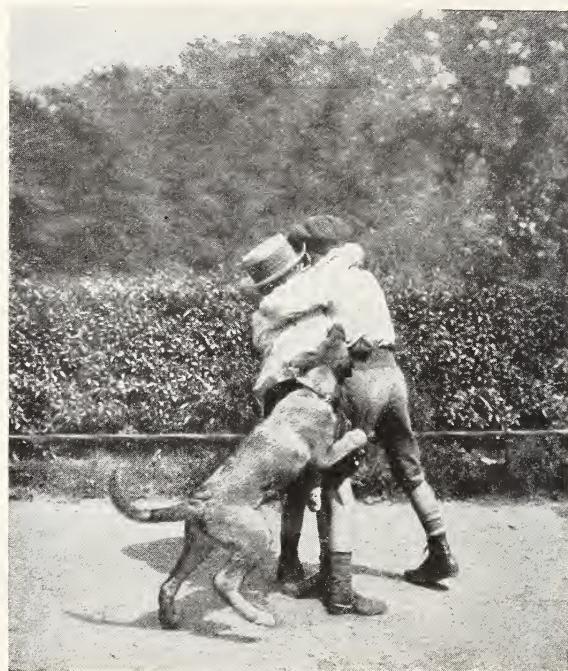


Fig. 183. Keeping the peace is the first duty.

somewhat impetuous husband, and whenever he had gone on too far ahead on walks, hunting mice or running races with the steam tram, and could not hear my whistle any more, she used to run after him to fetch him back. On one occasion she showed him the way out of a wire-enclosed building site, when he could not find it for himself. He, in his turn, showed her his gratitude by regularly catching her fleas, which favour he also extended later on to other "favourites" in his harem. Dogs, unless they are both outspoken autocrats, generally get along with each other quite well; young dogs especially seek intimate friendship with their older brothers. With bitches, however,

it is dangerous to trust too much to their evenness of temper for any length of time. In times of heat, during the period of gestation, and when suckling their pups, even the firmest friendships between bitches are severed. It is a natural, easily intelligible and inherited charac-



Fig. 184. "Charge Chester charge".

teristic of their foresight, that suckling bitches — with few exceptions as already mentioned — will not allow other dogs or bitches to approach their nest when occupied by their litter.



Fig. 185. In safe keeping.

Dogs will sometimes also make friends with other animals, *faute de mieux*, and will become very intimate; that is to say some, not all, and this depends entirely on their education and the place. Where the "shikar" instinct does not get the better of them, their

relation to other animals generally rests on a complacency of soul which is inherited or acquired. With regard to animals of their own farm yard, it is based on a tacit tolerance of the property of their



Fig. 186. The Reformed School.

master. Real friendship which causes them to seek one another, and to caress and protect the weaker is, however, comparatively rare.

It is often a matter of the inherent tending instinct with the shepherd dog, who is not working with the flocks, which makes him

take care of other living beings in his own way, to gather them together, to fend for them, but also not to allow anything to be done in contravention of law and order, according to his own private interpretation of what that is. This tendency can often be the cause of many regrettable "misunderstandings", which is also again the case when the sense of propriety of the shepherd dog is outraged by other occurrences



Fig. 187. Paying a Call.

that seem to him to be against the rule. Many of them will drive together a regular menagerie of all kinds of living creatures in order that they may play "tending" with them. One dog, Dr. Schnörr's Hektor at Kochel, once even drove an entire flock of strange sheep on to his master's farm. When one of my children at one time received the present of a sheep; all my dogs wanted to tend it, and none of them did it any harm, but in their zeal they came to blows among



Fig. 188. "Ring a ring of Roses"



Fig. 189. ". . . . and all fell down".

themselves. It must also be called an effect of the tending instinct, if the dog, during the family walks, wishes to keep his "relatives" together, and will not allow them to stray too far apart, or even to



Fig. 190. "Show toothipegs".

separate; for if by chance they do, he runs excitedly from one to the other, in order to gather his flock together.



Fig. 191. Good with the chickens.

It is not astonishing that with such an active and action-loving dog as our shepherd dog, in cases where he is not bound by any service, the playing instinct will survive right up to old age. Play is a preparation for the work of life; it is a picture of reality without its extreme consequences. The play of young dogs, as well as that of older ones who have still a taste for it, is therefore a representation in fun of the struggle for food and competition for the favour of the love-partner. To such sporting belong attack and strife, flight and persecution, hunting and catching, cunningly seeking out for hiding places, and smelling out the cāches of others, and also all the wiles with which the wooer tries to court his lady's favour, or with which the coy one tries to cloak her own eagerness. As genuine children of Nature,



Fig. 192. Bunnies' friend.

playful dogs keep their minds on what Schiller once described as the task of Nature:

"From the beginning until now the edifice of the Universe is sustained by Philosophy, but it maintains its course by means of Hunger and Love".

If then their playing together is based on the appeasing of hunger and the satisfying of passion, the lonely dog will occupy himself with pieces of wood, stones, and other rolling and floating objects, with falling leaves and with pieces of ice. Some, just like real children, will splash the water. Schwabenmädel von Grafrath 3, for example, would do her best to catch the scattered drops, and the thin stream of water from a small waterfall, or she would play with small

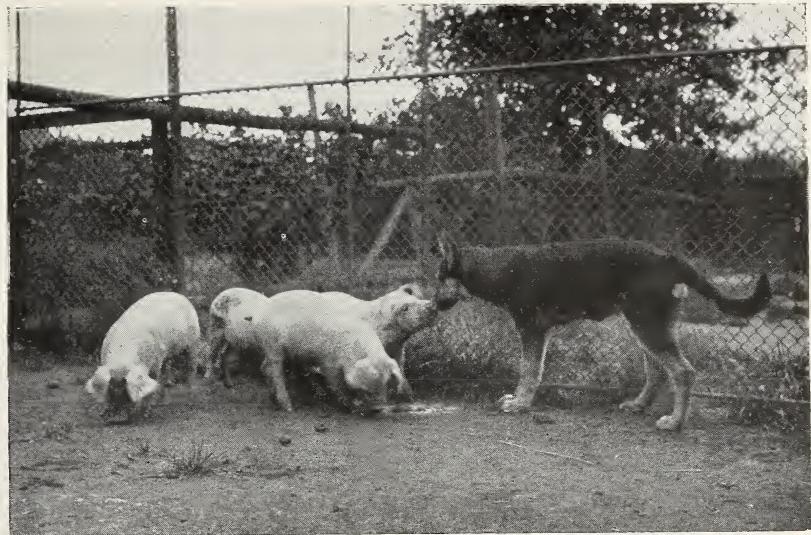


Fig. 193. How goes it?

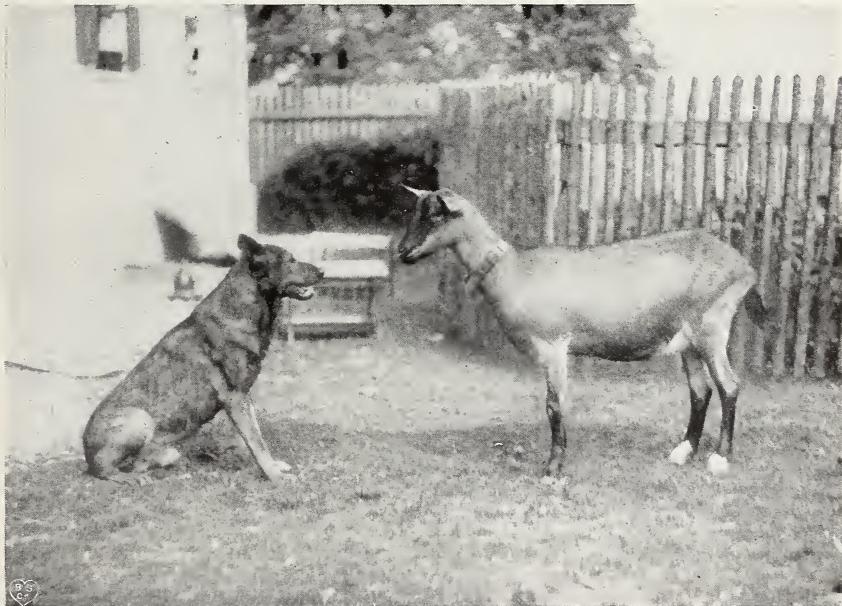


Fig. 194. Whom I love I tease.

pieces of ice or wood in the water trough. My present Hell has her regular playing corner in the park, where she keeps all her playthings, branches, pieces of wood, old bones, cabbage stalks, briquettes, pieces of sheet metal, and all imaginable kinds of refuse she can lay paws on. When playing, she throws all these objects high into the air, catches them, rushes and dances about with them, shakes them, or tears them to pieces. Just like a cat loves to play with her long flexible tail, and as children play with their little feet, so too, dogs love to play with their tail and try to chase it round and round



Fig. 195. Come and play.

until they have caught its end in their mouth, when they will often joyfully race away to celebrate their success, and this can be even observed in dogs whose tails have been docked. My Hell often adds to this catch-play with the end of her tail a regular somersault; if the master or any of his relatives deign to play with them, their joy is of course much greater; many a dog solicits it by bringing to the chosen playmate, a piece of wood or some other article of their otherwise carefully-guarded playthings. With regard to children's toys, they maintain a peculiar attitude; animals that are covered

with real skin and painted are recognised by them as such, and after sniffing at them, they treat them with contempt.



Fig. 196. A cat and dog life.

The same was the case with a large rocking-horse, which was given to my youngest child as a Christmas present; when by chance it was rocked, the dog barked furiously. Dr. Fr. Schmidt reported



Fig. 197. Brought up on the bottle.

the same. When the old, child-crazy service dog Mira, who was attracted by every flock of sheep far and near, saw a toy sheep, about the size of a lamb, which was covered with a genuine sheep skin, she was almost beside herself with joy. She sniffed at it and licked the thing all over, pushed it gently, laid herself down by the side of it and placed herself across it as if she wished to suckle the orphaned one. She loved the sheep so much that very soon there was no more wool on it; it thus lost the scent of the sheep, and Mira's interest disappeared. Audifax, again, busied himself very much with small clock-work toys. He always wished to get hold of a metal seal which slid over the floor, but every time before he seized it, he turned his head shuddering, as if in remembrance of the corroding liquid which comes from the cold, sleek salamander, to which the toy bore some resemblance. The greatest excitement, however, was when a small toy motor, tooling round in a circle, ran between his legs.



Fig. 198. I say, you fellows, leave a little for me (young hedgehogs).

As we have been dealing with play, let us now also speak of higher things, i. e. about the implements that the dog has at his disposal. Because the dog only has limbs which are made for running and has no hand to grip with, like human beings and monkeys, he cannot use any instrument, to help him to attain a certain end, as already is the case with monkeys. For all that, he understands very well how to use means that are outside him, when he needs them, and when he cannot attain his object by the means that are naturally at his disposal. It can be accepted as certain that our wild dog, the fox, throws the hedgehog into the water, or makes water over it, to make it unroll, and overpowers it when it is defenceless. My Audifax was, as a strong South German working dog, rather big for the majority of bitches, and so the covering of smaller bitches was, on occasions, rather difficult for him. In order that I should not unnecessarily strain this much sought-after dog, I once

placed a small built bitch on a suitable platform so as to obviate the difference in the height of the dogs. Since that time, Audi always came to me, when he could not make the connection, to ask my help. In other ways too, dogs know very well how to obtain help when they have come to the end of their own natural resources. In the yard of my Headquarters at Laon, there was a large stone slab which leant against the wall, behind which the rats often took shelter. The "Hell" I had was an uncommonly good rat-catcher; if her nose informed her, — and it never failed her, for she examined the stone every time she passed by, — that a rat was in hiding, she came to me at once asking for help, after I had the first time, (in answer to her



Fig. 199. Who the deuce are you? (young cuckoo).

excited dancing around the stone), ordered two men to remove it. Once upon a time Adalo was accidentally shut out of my park, (he was one of those most obliging dogs who do not open doors for themselves); he accordingly went over to someone who was passing and dragged him to the gate, although he was quite a stranger, who rang the bell and told us all about it. It is often reported that sick dogs, or those in need of attention, will come to their master, or to the veterinary surgeon of their own free will to show their injured members. It is naturally understood here that the treatment will involve no pain, that it will soothe the pain, and that it is nothing to be taken. Dogs will try to employ every means to avoid this last. They know very well how to conceal drops or pills in their mouths, if one does not watch them carefully and compel them to swallow them, until they

have an opportunity of spitting them out when nobody is looking. Horand once ran into a train, I am glad to say that the accident was not severe, although, as a result of the mighty push he had sustained, he was lame for a few days in his hindquarters and had to lie under an ice pack. During that time, naturally, he was unable to scratch himself with his hind paws; so, when his necessity was great, he used to crawl to me from his place and make weak attempts at scratching, begging and holding the itching part towards me. If his wish was understood and carried out, he showed his gratitude with good-natured grunts and wheezes.



Fig. 200. Paddling.

In spite of their great suppleness, there are two places where our dogs cannot reach to scratch themselves, which are inaccessible both to teeth and paws, namely the withers and the top of the back. It goes without saying that harassed fleas will gladly resort to these places of refuge. But the dog, notwithstanding, knows how to get at them when he itches there, and rubs himself against all kinds of suitable objects which offer a firm resistance, such as the square edges of furniture, under forms and chairs, and at the door of his kennel etc. When he is loose, he rolls on the ground, preferably on the turf, which has a certain combing and shampooing effect, or if there are branches or something similar, he will certainly lay himself on these. I have often been able to notice on the strip of lawn before my study how the dogs have collected together small pieces from the wood

pile, or fairly large wind-fallen branches from the park, and then rolled on them with delight. The perseverance of some dogs in the bad habit of availing themselves of every opportunity to roll on dung, offal, or decaying stuff of every description, that is to say on horribly smelling things, and thus making themselves stink, so that they cannot be allowed into the room in this state without first having a thoroughly good bath, is often perhaps a means of driving out the fleas and other vermin from their backs. I believe that here too we are liable to regard the matter from our human point of view; even parasites have



Fig. 201. First Aid.

their power of scent; moths cannot stand camphor and naphthaline, and the already familiar flea, which is found with all kinds of bodily evaporation, — with the exception of the flea found on the dog, — does not, in my opinion, stick at such trifles as the smell of decay. I am more inclined to believe that this anointing with evil-smelling stuff, which is so offensive to us, but is very agreeable to the nose of the dog, can be attributed to a very different cause, even to that which makes us use perfumes and suchlike, which, as the result of their strength, are an abomination to the sensitive nose of the dog, and

that they do it, just as we, for pleasure. The wild dog does not invariably eat fresh meat, only, he also turns to carrion and animal dung; the domestic dog will also do the same at times and prefers smelly meat; perhaps from a deep-seated habit, and also to aid digestion. The smell of these things is very agreeable to him, he rolls on them so as to impregnate himself with the odour, and thereby to preserve a pleasant memory, — for, as we know, he thinks through his nose, — just as we take away with us a Menu card from some specially festive evening, as a souvenir. On the other hand, the dog knows very well



Fig. 202. "When I itch, I scratch".

how to get rid of smells that are disagreeable to him, especially when his nose has come into contact with them. In such circumstances, he tries to rub them off in the room, on the carpets, the furniture covers, even on the trousers of "dear master" if need be, but when in the open, he always finds places on the ground, that will absorb them well.

On the whole the dog has an excellent idea of how to use his natural implements, his tongue, his teeth, and his paws with their claws to satisfy the various needs of his body. He knows very well how to

take hold with his paws of large junks or bones, at which he begins to gnaw, and from which he bites or tears off smaller pieces. He laps up water with his tongue, and, by means of his tongue as well, can easily get rid of foreign bodies, such as hair, and splinters of wood and of bones that have got into his mouth and are sticking fast in his teeth. In case of necessity he will use his front paws to help him. Finally he can use his tongue to cleanse and lick his wounds. I am sure that this licking of his wounds is not done purposefully, but rather instinctively; it is however very much "*à propos*"; because after the staunching of the bleeding, the irritation, caused by the licking, draws new blood into the wound, and the strong nourishment afforded the injured tissue by the new blood rapidly repairs it, and consequently heals the injured part. His claws serve him in his toilet, for with them, as well as with teeth and tongue he combs himself. When flea catching, he snuffles through his hair with short blasts.

The clever use of his natural implements just described shows clearly that the dog has a sense of cleanliness. If he does not take so much care of his body as the cat, yet the healthy dog knows how to keep his coat always smooth and free from dirt. Most of them go willingly into the water, and on very hot days many will lie flat in a shallow stream. I have already spoken of some peculiarities that are seen in dogs when relieving themselves; generally speaking, the dog will seek such places where another dog has been for the same purpose, — preferably grassy spots, — but, as a trait of his wild dog ancestors, he always avoids, (p. 55) if possible, relieving himself in the neighbourhood of his hut or his lair. Thus it is not difficult to train him to be clean indoors, if one only understands how to develop this inherent tendency. Dogs who are in urgent need of relieving themselves, when in a room, will, when in extremis, if possible, (and the same holds good in the case of vomiting as well), seek for places covered with the carpet, if the master does not carefully look after them to let them out. This, for us, is naturally a very unpleasant characteristic, but it has its foundation in the racial habit, for the carpet, like the grassy spot, is absorbent. When he does this, the dog does not wish to hide what he has done, — his power of reasoning does not go so far, — but he simply follows the general natural instinct to cover his tracks. If people are in the room, the dog generally knows very well how to express his needs, and his wish "to leave the room". Even at nights by loud whining and, if necessary, by pulling off the bed clothes and pawing, he knows how to wake one up. Some silly ones, and indeed such they are, give in too soon, and when the person is too fast asleep to be easily waked, they sin, and then humbly resign themselves to their fate. Many, but not all dogs, make, after relieving themselves, some habitual scratching movements with their hind legs, which, however, are by no means sufficient for their intended purpose. This appears altogether senseless when it is done on a hard stone path or in a room, but it is, nothing else but a relic of an old ancestral custom, which still survives with a few. Their wild dog ancestors, undoubtedly had, like many

beasts of prey, the habit of digging into the ground and hiding their excrements by covering them with earth. This was not done out of a love of cleanliness, or from any moral sentiment, but only that the strong smelling odour might not unnecessarily attract enemies or warn their own prey. Here too there may be two minds in the dog, because, as we know, this relieving of themselves at certain places serves other purposes as well.

It is easily understood that a dog which has had the evolution of our shepherd dog must also have developed a strong instinct for hunting. Granted that the newly tamed dog was at first only used as a guardian, he became, even when he was the dog of the Bronze Age, an indispensable assistant in hunting. Later on, in the times of our forefathers, he would sneak out of the enclosure near the oak-grove to the old Germanic "field" to catch mice for his meal, or if his luck was in, to seize a hare in the furrow. With his master he then went to the merry Meet; an old Germanic urn from a Berlin collection gives us an irrefutable proof of this, because on it we find a picture of a stag hunt with dogs. The two hunting assistants are certainly not beautiful, but from the fact that they have erect ears, we cannot but infer that they are dogs of the Bronze Age. As time went

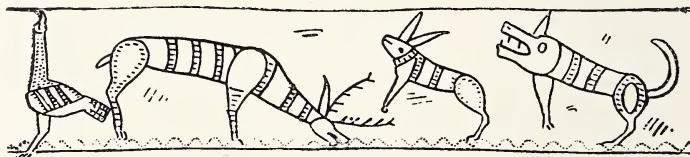


Fig. 203. Stag hunt with dogs, on an ancient Germanic Urn from the Ethnological Museum Berlin (after Seefelberg).

on, service in the yard and with the flocks included also the obligation to serve on hunts for bears and other larger game, which indeed has lasted right up to our own times. Our present day flock and country dog has also so many different opportunities, — which come by chance or design —, for satisfying his lust for hunting of all kinds down to quarries of the meanest description, that we need not wonder at the passion for the chase that we see in our shepherd dogs, nor at their clever use of their acute senses in that direction. The cleverest poachers among dogs, and those that are most feared by our huntsmen, are always shepherd dogs who, (which is an inherited racial characteristic), like to foregather for such illicit hunts, when they know very well how to avoid both snares and guns. When he is not busy, the shepherd dog, even on service, has ample opportunity for indulging in his passion, and I think that many a shepherd will "wink the other eye", when his dog comes running to him with a hare in his mouth, or when the master suspects the presence of a hare in its hole, he will cause the dog to herd up the sheep that they may trample the surprised animal under their feet. Fortunately, however, the great majority of our shepherds prefer dogs who do not poach,

and will merely permit them to dig for mice, moles and hamsters, and otherwise, only lend them for regular hunting in the case of beasts of prey, for martens, otters, and especially for badgers and boars. In Hanover and in the Eifel, even to-day, shepherd dogs always accompany the hunting pack, for they are the most reliable trackers of boars, and will, according to Schlotfeld, keep to the track even when it is under deep snow, and when bloodhounds are useless.



Fig. 204. Sascha vom Hahnerberg SZ 7655 with the kill.

There are indeed, as I have already said, a majority of such right minded shepherds, who, in the real old German way, place common weal above their own profit, and most of them also take great care to make their breed intentionally free from poaching tendencies, and yet useful for hunting at the same time. It is indeed only a matter of training to make the dog averse to poaching, seeking and following the tracks of wild animals, and to abstain from interfering with them. The training must, however, be begun early,

and must be very thorough. If this instinct for hunting has once broken the bonds of restraint, it is hardly possible to fight against it successfully; and the same is the case with regard to animals that are neglected. I will here give two examples to show how quickly a shepherd dog understands what may be allowed as hunting and how naturally he takes to it of his own accord. I received my present Hell direct from the flocks, when she was eighteen months old. She was absolutely free from poaching tendencies; for hours I could wander through the forests and let her run about without any fear that she would follow one of the numerous tracks; but after I had shot a squirrel from a nut tree in my garden which, to her astonishment, had given her a nasty bite on the nose, before she could kill it; she now has no greater pleasure than squirrel hunting. She tracks all the ways by which the numerous squirrels of the neighbouring forest come into our park and orchard, follows them as far as the tree up which they have climbed, and shows me the place where they are sitting. She even finds them out in the maze of the branches of the pines and beeches, which are about eighty feet high, while I am obliged to peer for them a long time, before I can discover the small vermin. Other "game" has failed to interest her up to the present. Dr. Alt-kemper reports how his Sascha von Hahnerberg 7655 PH, in Lorraine, trained herself to hunt wild boars. The bitch, who up to that time had never served in hunting, was first led to a boar that had been killed, over which she at once uttered the death cry. On the following hunt, Sascha brought a sownder to bay, which was killed before her eyes. Thus Sascha kept on adding to her experiences from hunt to hunt. No maze of thorns was ever too dense for her; she left no hollows unexamined. She ferreted out the boars and never allowed them to sneak away between the beaters, but drove them across the guns, and if one of them tried conclusions with her, she knew very well how to avoid his tusks. Day after day she followed the hunt over most difficult country, up hill and down dale, even after the pad of one foot had been injured, without tiring; and it was she and she alone who made this hunt a success, but she left the tracks of all other game absolutely alone.

There are a large number of huntsmen who use a shepherd dog for hunting. The majority of them, however, do so on the quiet in order not to be laughed at, because of the unofficial and unrecognised status of their assistant. The Grand Duke of Oldenberg told me one day that he shot all his bucks over a shepherd dog, and that his son in law, Prince Eitel Friedrich of Prussia too, often made his Gernot vom Falkenstein 4096 PH ferret out bucks that had been wounded. The forester Wesenberg of Hollbrunn had trained his Bella vom Schönbach 21990 PH so well that he could match her with the best of blood hounds on the blood spoor of stags, boars, and bucks. In addition to this, the bitch was very useful in hunting hares, rabbits, and wild birds; she would kill foxes and wild cats and was a very reliable guardian. Very touching was the eulogy which Dr. Römer of Schondorf dedicated in "*Wild und Hund*" (*Game and the dog*),

to the memory of his Sigrid Lug-ins-Land 55903 with whom he had often hunted bucks, woodcocks and hares; but the following description of a shepherd dog's work as drawing dog, by Hermann Löns, is quite unsurpassable:

"The noble drawing dog is a thing of the past, no museum possesses a specimen of his coat or of his skeleton; a few illustrations and some rare descriptions are all that remain to us. He has become a legend, which scarcely anyone to-day believes true. If in hunting circles anyone tells how there once existed a species of dog who could follow in the track of a certain particular unwounded stag, without being distracted by other similar tracks, everyone will shake his head with a sneer of incredulity."

"I never accepted all the reports of old writers about the work of drawing dogs "without a pinch of salt"; even the work of the blood hounds of olden times appeared to me to be described in a somewhat exaggerated way, if I compare it with what I saw later on myself. An experience which I had, however, a few years ago, converted me from "a Saul into a Paul".

"This occurred in the Lüneberger Heide. I was hunting with a landed proprietor called Lütterloh of Starkeshorn near Eschede. I was most keen to secure a fine stag, but it was very difficult to shoot a stag there, for the red deer only came out very late at night and disappeared into the woods again at early dawn. Moreover the country road which crossed the hunting area, and which formerly had served to betray the tracks of the deer, was being remetalled, and then the steam-roller came on, frightening away the stags for a whole week, besides which, every other day, large bodies of troops who came from Münster, tramped over the road early and late. Twice I had drawn a bead on a huge "ten pointer", but unfortunately only after he had got beyond our borders. Two other stags, one a "ten pointer", and his companion an "eight pointer" hove in sight, but the light was too bad for shooting."

"My holidays were coming to an end; on the evening of the last day, the owner of the shoot told me that he would have the deer scared into the open, and that I should have my stag. I had, however, told him before that I never shot a stag under such circumstances, at which he was very pleased, for he, like many of our large landed proprietors in this district, was a good sporting deerstalker, and a sure shot with ball cartridge, according to the hunting regulations."

"On the following morning, I travelled over the country road, crossing the hunting area on my bicycle, on the lookout for tracks. The owner and his brothers placed themselves at the principle positions, and I was invited to follow the tracks on the excellently-kept stalking path, before the net, to the thinner clearings and the plantations."

"I saw many does, even a good buck, some other game, one boar, but no stag. I stalked back and made my report. Herr Lütterloh

told me I should again stalk over the large thinner clearings. A huge stag had just passed the border. I did so, and carefully crossed the thinner clearings, standing still at every row of trees, and peering right and left”

“I only saw some does, and already thought that the stag had taken to a thicket or had flown over the obstacles set there to scare him, when I found him sitting and sleeping in a wide clump of trees, quite unprotected. He sat about twenty paces from the stalking path to the left of me, so near that I was able to count each one of the ten white points spreading out wide on the high mighty antlers. I prodded him, the stag started up, still sitting on his bed, I aimed at his shoulder, pulled the trigger — and had a misfire!!!”

“The stag, however, began to sniff, still sitting, because I stood hidden, and the wind was blowing away from me, rubbed his head on the ground, and pricked up his ears. I opened my rifle, silently unloaded the cartridge, rammed in another, but before I had closed the breech, the stag stood up, glanced here and there, and sprang away. I could easily have bagged him by firing the small shot cartridges, but this indeed I did not wish to do.”

“I stalked back again, and once more reported progress. “Well then, my son must work with the dog”, said Herr Lütterloh’ “and we three will station ourselves in front of the new plantations behind the road, because the stag will certainly hide himself there”. I was somewhat amazed, so I asked, “must the dog ferret out the stag, from all the fresh traces of roebuck, boars, and red deer?” “Naturally”, he replied, “he will do that for a dead certainty, he has often done it”.

“I thought it over for a minute. I knew that the dog which was a small, unattractive shepherd’s cur, could do the work of a blood hound fairly efficiently; that he had tracked out many bucks, boars and red deer, and that too sometimes in very difficult circumstances. I was already very pleased about some tracking work which he had done, when he had quietly and carefully tracked, the whole morning, a buck which I had wounded the night before; and I knew that his master was a man of his word. I accordingly said to myself that perhaps as I should never have another chance of seeing such work of a drawing dog, I would ask if I might be allowed to go with the young Lütterloh.”

“The two gentlemen placed themselves in front of me; and I conducted the boy to the bed of the “ten-pointer”. The dog led us through the plantation over the heath, and again to the plantation, again over the heath through the younger and the older plantations; he held on to the tracks of the “ten pointer” unerringly, and did not bother himself about the other and partly fresh tracks. Quietly, and only eagerly whining a little now and then, he worked over the track of the unwounded animal for about an hour, and then became somewhat more lively when he came again to the new plantation in the dunes, behind which the two huntsmen were standing. Matters now began to move; the dog flung himself forward on his collar,

dragged his young leader with him, went to and fro a few times in and out of the honeycomb formed by the pine trees, some of which were above a man's height in growth. We heard the stag roaring and bellowing; and then there was the sound of a rifle. Lütterloh had shot the stag, (which, except for a very small strip of the back, had been hidden in a hollow thickly planted with large trees), in full flight, at a distance of about 100 yards."

"My friendly hunting host was very sorry that, in spite of so many nights, when I had burnt so much midnight oil, I could take no antlers home with me. I, however, was not sorry, although I would gladly have bagged this stag, or either of the other two stags, which one morning had bounded, in their play, across my path, about 40 paces away in the mist. But more valuable to me than any stag was this example of genuine regular work of a drawing dog after the old style, which I had seen that day, and that too from one which was only a shepherd dog."

Thanks to his evolution, the shepherd dog is in the most intimate rapport with Nature and his fellow creatures, and knows how to grasp what some town dogs, especially those relatives of his who were one-sidedly brought up, have forgotten a long time since. The quickness for discerning crawling worms and snakes, which he always suspects of being poisonous, has been in the blood of the shepherd dog from primitive times, and has not been dulled by the later conditions of life in the country and by service with the flocks and herds, but was kept exercised, for the shepherds pastured their flocks often enough in districts infested with adders. My Mira could lie in the park by the hour on the watch at a place where adders abounded; when she found them, she snapped them just behind the head, then bit their backbone through, and let them lie. Herr Eggert, Chief of the Police at Dar es Salaam told me the same thing, how his Lola Trabant 9244 PH had bitten to death a puff-adder which was about five feet long, and which is one the most poisonous snakes. One of my dogs, Kladobert, used to amuse himself by catching frogs at the side of the pond, which he killed one and all by biting them. Naturally lizards were likewise hunted, as also were grasshoppers, locusts and cockchafers, which were caught with all the goodwill in the world. To be adept at mouse-catching is a point of honour with a shepherd dog; rats, voles, hamsters and similar pests he deals with summarily; even moles, when he catches them while digging, or meets them above ground. Most of them will make a tremendous fuss over a hedgehog, and some know how to get the better of him. My Mira understood how to do this, but how she managed to do it. I unfortunately could never discover. I only used to find the empty skin early in the morning; for even the best brought up dog will not always disdain such easily-won "bonnes bouches". The country dogs, however, must generally depend on this animal for food, which at anyrate serves as a change in a diet which is apt to become monotonous. The shrew, which smells strongly of musk, is naturally always distasteful to them. Most shepherd dogs are uncommonly sharp on

wasps, bumble bees, and bees; some will turn a room upside down to catch one which has flown in. They make the most impossible springs in the air to catch one, and they know how to turn themselves round while off the ground, in their attempts to follow their buzzing adversary, — they must indeed have good eyes, — and they snap at them with lips drawn back so that one can plainly hear the sound of the teeth as they gnash them one against the other. So far as wasps are concerned, this may be an inherited hostility, because in the wild, wasps, when buzzing out of their nest in the ground, may have already stung some heedless wild dog or herdsman's dog in spite of their thick smooth hair; head, legs and stomach afford place enough through which a swarm, which happens to be hovering over the dog, can sting. The Hell which I had during the



Fig. 205. Dog and hedgehog, (from a photograph by the author).

War used to eat bees — in fairness to her it is only right to say that it was on account of the honey — after she was quite sure that they were dead. I have not noticed this with other dogs; but it seemed to me that they were less hot on bees than on wasps.

It is often said that dogs are weatherwise. In a certain sense they do give warning of a change in the weather, especially wet weather; at such a time the smell of the evaporation from their skin is especially noticeable; which probably is the result of a greater density of water in the air, by which the residue of the skin exhalation is better dissolved than in dry weather. It is quite certain that such a sensitive, (not somewhat weak-nerved), animal as our dog, can feel in advance a coming change in the weather, just as other animals, who live at liberty. Older dogs can give correct and unmistakable warning of coming rain or frost. They feel it in their bones, just as

we do in ours when we are attacked by rheumatism and nerve pains, and, like us, they are in a bad temper, and grumble about it when lying down or when getting up. Such maladies are quite intelligible, considering the dog's manner of life, which involves exposure to the worst kind of weather, camping on the damp cold ground and very often wet feet. That alone is sufficient to explain why our dogs like the warm rug by the fireside, or to lie in the noonday sun, for then they store up heat for cold times, to thaw their inside. M. v. Unruh explains the peculiar way dogs have of turning round before they lie down, by the necessity for making supple the joints which had grown stiff by long standing; while Darwin considers that this habit is inherited, for the wild dog when camping in the undergrowth and the grass was first obliged to trample out his bed. This latter seems to me to be the more probable explanation, because we can see such turning around in young animals that are still supple, when they draw up their back and their legs close together, just like a cat, before they lie down for a long sleep. One might sometimes say that they let themselves fall asleep with a flop which was quite audible. It has also been often observed that dogs, that wish to lie down, habitually make scratching motions with their fore-paws as if to smooth fancied unevennesses on the ground and to drive away snakes and other vermin. This can be observed especially when they are on the point of lying down in the room on a soft cushion or on the carpet.

Dogs have a very sensitive premonition for coming storms. I was able to establish this with Freia, a bitch who was terrified at thunderstorms, for, one evening she absolutely refused to take her nightly stroll; she remained standing at the front door, snuggling up to me and looking fearfully towards the tree-tops that were swaying in the occasional gusts, across the yard where monstrous shadows were dancing in the pale moonlight. Some hours later we had one of the heaviest thunderstorms I have ever seen. It is probable that such an attitude may have given the dog the reputation for being a ghost seer, just as at other times this restless shadow play of the trees in the moonlight, which the dog could not explain to himself, may have been the cause of his "baying the moon", and which in time developed into a howling canine symphony. I have also noticed fear of thunderstorms in other shepherd dogs as well, and even in those that otherwise were stout pugnacious fellows, who used to hide between the legs of their master, during the thunder and lightning. One bitch, Irma von der Grafschaft of Henegau 15972 PH, used always to crawl under my bed during thunderstorms at night, which was especially disagreeable, because she would express her discomfort in a thoroughly primitive way. This fear of thunder weather, however, has nothing to do with weak nerves. It goes without saying that the strong electric tension of the atmosphere has an influence over our dog with his sensitive nerves; for his inherited memory tells him that such a thunderstorm is a serious danger for him when he is in the open without protection; that is why he seeks out then, — as

in all other cases of sudden surprise or panic, — the place where he is accustomed to find shelter, viz. his master's side. Adalo, who was also very sensitive to thunderstorms, did this regularly, when on warm summer nights I used to sit on the verandah, where the earth-shaking effect of the express train that thundered down the hill on the border of my estate was especially violent. The vibrations of the ground, so inexplicable to him, may have appeared to be preparatory to an earthquake before which the descendant of the former cave-dwellers instinctively wished to fly. It is therefore very surprising that in a real earthquake in 1911 Adalo remained very quiet, but this came on so unexpectedly with one tremour only, that his comparative indifference in this case is easily explained.

Observation of human beings, especially of children, shows that the weather has a very important influence on their conduct and efficiency. While dry, sunny weather generally makes for high efficiency and for good work, both are considerably influenced for the worse in damp and gloomy weather, and this holds good to such an extent that large establishments have already begun to take this into consideration. Fire Insurance Companies also know that most fires occur in times of atmospheric depression and damp weather, because, at such times, man's power of attention is not so acute. The conduct of school children, according to the most thorough examination and comparison, shows to the best advantage in calm and fine weather. It deteriorates in proportion as the sky changes from "Set Fair", to "Cloudy", and to "Rain". At such times, attention wanders, and restlessness, eagerness to play, and disobedience at once become manifest. Suffocating heat makes children naturally listless and sleepy; and a strong wind, invigorating them with something of its own strength, makes them more and more inattentive, noisy and restless. It will not be without advantage to extend these principles of observation to our dogs, not only to working dogs in particular, but also to all dogs in general, and to note their response to the different conditions of weather, because this will enable us to form conclusions as to their industry or disinclination to work at different times. The following general classification of weather would be sufficient: "Fine Weather"; "Cloudy"; "Rain" (Snow); "Warm"; (Hot); "Cold"; (Frost); "Oppression"; "Windy"; "Stormy"; "Thunder". The response of the dogs to these might be described as "Willingness"; "Attention"; "Obedience"; "Laziness"; "Inattentiveness"; "Disobedience"; "Playfulness"; "Restlessness"; moreover, we must not forget to notice the infallibility of their scent in all and each one of these weather conditions.

Whoever of us has been blessed (?) with nerves either through his vocation, natural aptitude, or overwork knows very well that he can make certain predictions about the weather without the help of any barometer, and also to what extent the corresponding condition of the weather influences his mood and his efficiency. This is the case not only with refined and educated people, with their nerves doubly attuned to the vagaries of the weather, but also with

every living creature. This fact may even be observed by townspeople, who in times of the stillness and depression are often bothered by the persistency of the flies, who will insist in settling on them, and in wind and storm too are troubled by the restless excitement of these insects; to how much greater extent then can he who is in the open more often than not make such studies? Here is a swarm of gnats already dancing in the last shower, while the atmosphere is clearing. There is the spider who is beginning to spin her web, from which she will break off again at the approach of wind. Elsewhere, we find the always observable haste and restlessness of the whole animal kingdom, large and small, whether they be biped, quadruped or centipede, when the weather changes, and their irritability at the approach of wind and sharp frost. It goes therefore without saying that such a sensitive animal as our shepherd dog, which is still united with the delights of liberty by a thousand ties, is especially well adapted to discern every coming condition of the weather. It will also be very useful to dog trainers to learn more about this in order that they may be able to take into consideration, when working with their dogs, such barometric influences as well, and to adapt their methods accordingly.

In the preceding remarks about the soul-life of our dogs I have intentionally avoided speaking about conscious actions; but I have several times used expressions which are usual when speaking about human experiences in the emotional and spiritual life. This was not done to humanise what I reported about the dogs, but in order that I might give the reader a correct idea. We must be careful to strictly maintain that whatever is implied when using such expressions in connection with man is only intended to indicate the veriest beginnings of those same feelings when speaking of the dog. It is, however, my great desire to do all I can to promote further attentive observation of the dog, for which the S. V. would be very pleased to serve as a depositary. The description of the service rendered by our dogs will, moreover, furnish numerous valuable data for judging his mental capacity. One thing is already firmly established: our shepherd dogs have reached among the animals, and also among their own comrades, a very high degree of mental development, which they owe just as much to their own acute senses as to their evolution and their work.

The dog's sense of locality is wonderfully developed; it is born into this descendant of the robber to make the best use of his country and to know all the short cuts. He immediately recognises all the roads along which he has already passed, and the squares and the houses which he has previously visited with his master. Whenever he has run on in advance of him, he will stop and wait to see what he will do. He also knows how to arrive at conclusions with respect to his knowledge of the country. My Headquarters, when in the district of Laon, were in a building, adjoining a large garden. During the winter, the Hell, which I had with me at the Front and who did not yet know the ways of a garden, had been allowed to romp

round there to her heart's content, and was always my companion whenever I went out to stamp my cramped feet after my work. As soon as the garden was dug and planted in the Spring of 1918, it was naturally placed "out of bounds", and the gates were locked lest Hell, romping over the beds, might destroy the seed in her wish to dig there for mice, moles and other animals. She felt very sore because I did not take her along with me any longer when I went into the garden. On one of the first days when I was examining the work that had been done there, Hell suddenly stood at my side radiating joy, i. e. violently wagging her tail. At first I thought that she had sneaked in behind one of the gardeners, and I shut her out again. Hardly had I reached my former place when she came along at full tilt and, as I could observe, through the back entrance to the garden. It is true that on one or two occasions when I had entered the garden accompanied by Hell, I had come by that particular gate on my way back from the fields, but this time it was impossible that Hell should have taken this way across the fields. She had, on the contrary, run from the flower garden, across the yard of the house, over a long stretch of road, and across the farmyard of another estate, altogether more than a quarter of a mile, and along a road which we had never taken together.

The crab-catchers on the seashore (Waterkant) speak of the wonderful adaptability and sense of locality possessed by our dogs. They employ shepherd dogs as leading dogs in front of two more powerful animals whose duty it is to draw the heavy granite barges through the shallows at low tide. The shepherd dog in all circumstances, even in the blackest night, — for they dare not use guiding lights on the sands, — knows the way back to the shore.

We have innumerable examples of dogs, who have lost their masters when out for a walk in a strange part, or in the town, knowing how to find their way home again; even of very young dogs who had gone off on an excursion of exploration. There can therefore be no adequate explanation for the fact, (and we do not know which senses serve them), that dogs, who had been taken away from their homes and sent far away, find their way back again to their old master out of the strange district, and by paths over which they had never travelled before, unless we are prepared to credit them with the possession of a homing sense, which guides them towards their home and their own place. There are more than enough proofs to vouch for this power of finding their way back; sometimes the dogs are overtaken on the way home by hunger and fatigue, but they are always going in the right direction. My Bissula von Grafrath 228 HGH ran away from me when I had had her in my possession only three weeks, after fighting with her kennel companions. It must have been about three o'clock in the afternoon that she went away; the same evening she arrived at the home of her former master, who was a shepherd in the neighbourhood of Augsburg, which was about thirty two miles away as the crow flies. Further, at the time when she had been brought to me by the shepherd, a considerable detour had

been made on the Railway. Speaking from a human standpoint, one might talk about the landmarks being impressed on the memory by sight; but here are dogs who have found their way home again,



Fig. 206. "Right or Left"?

who had made a long journey all the way in boxes and enclosed goods wagons.

In addition to these numerous instances of the dog's sense of locality, we have the testimony of Edinger with reference to a dog who took care to make himself scarce on Saturdays, which was his

"bath day" so as to avoid what was for him a most unpleasant wetting. Whether this indicates a sense of time, or whether the dog distinguished the preparations for the bath from other activities, remains yet to be proved. Edinger gives us still further data for this; as for instance the information about the bitch, which he kept for observation, which would run out of his reception room every afternoon at a certain time, after she had learnt by experience that she would be ordered out at that particular time. A sense of time is also to be observed in what follows, as well as from the well-known inclination of wild and domestic dogs to bury their food. In the case of the watch dogs of a certain garrison at home, it was the custom to place their feeding dishes before their kennels at 9 o'clock in the morning, and they were taken away an hour later whether they had been emptied or no. Now dogs, generally even when they have been working the night before, are not very hungry in the morning, and have their feeding time towards evening. After a while, it happened that when they came to fetch the feeding dishes away, some were missing. These were found in the back of the kennel, behind the straw. After careful investigation it was proved that some dogs had taken their unemptied feeding dishes, — which had formerly been large fruit tins, — in their teeth and had placed them in their kennels. It goes without saying that the dog knows his feeding time; his stomach serves as a time-keeper. But in an orderly household one can find opportunities enough to prove that the dog has a most unmistakable understanding of the meaning of time, and we shall be able to find still further proofs in dealing with the work of the dog with the flocks and herds.

Let us now proceed to the consideration of the organs of the senses. According to Liepmann, the observations of the senses, which are the direct result of their own activity, have more to do with the general explanation of the phenomena of life, than with the special province of Psychology. Because, moreover, even experiments in this direction which were generally not in a position to take all these influences into account, (and which accordingly have little or no utility as proofs), have shown this at any rate, that the activity of the senses is very dependent on the acuteness of the perceptions and the prohibitions. Let us apply this statement to the work of the dog, especially to combat the contention that is frequently advanced that the dog is incapable of using the impressions he receives through his senses in a definite way.

The power of scent is the chief of all the senses. According to von Uerkell, the world which is open to the observation of the dog is apprehended chiefly by the indications transmitted to him through his powers of scent; or, to put it concisely, the dog thinks through his nose. The nose is his fundamental sense, it is the one which is the most strongly developed in him, and with which, in cases of necessity, he tests the truth of all the perceptions which are transferred to him from the other senses. The preponderating influence of the sense of smell will be understood when one sees that in the hunting

dog the mucuous membranes of the nose, into which the olfactory nerves radiate, occupy so large a place that if they were disentangled and drawn out from all their convolutions, they would be large enough to cover the body of the dog. If what we just said about the mucuous membranes of the nose is true of a hunting dog with his broader nose, it holds equally true of the shepherd dog, whose head, like that of the wild dog is more pointed, and the elongation of whose nose serves to compensate for the lack of width. On the other hand, it is true that the smelling cells are situated in the upper part of the nose; and we will, at the same time, not forget that the shepherd dog, as well as the hunting dog, comes from the C. Poutiatini.

We group the animals according to their basic sense on which their character is moulded, such as "nose", "eye" animals etc. This principle of division after all takes its origin from Dr. Zell, but was advanced first in 1831 by Ocken and was used later by the elder Brehm. Dr. Zell has only attempted to build on the theory of Ocken, which is that Nature does not give two highly developed senses to one and the same animal; but that rather, only one sense is really well developed and the others, on the other hand, to a more moderate extent. Goethe also has noticed something similar, for he says in his "*Metamorphose der Tierwelt*" (*Transformation of the Animal World*): "If you see that to any one of the creatures any special preference is given, you must at once ask where it might lack in some other respect, and try with discriminating mind to enter further into the matter; then you will find the key to unlock Creation". Zell however, obstinately insists with great emphasis on his unheard-of theory and untenable contention that our shepherd dog has no power of scent, just because he can see well. The only result of such faulty premisses is to place theories above ascertained facts. The basic sense with our shepherd dog, as with all the other members of the dog family is the sense of smell; it is the most highly developed of all the senses that he has, although the others are very sharp. It was necessary to dwell upon this point, because the writings of Zell have a certain vogue in lay circles, and thus mistakes about the powers of conductivity in the nose of the shepherd dog could be easily learnt.

According to Dr. Staby, the sense of smell, or the power to scent is a chemical sense; he calls it "the chemical Enquiry Office of the animal". In contrast to the light and sound waves which act in concert with the corresponding activities of the eye and the ear, the smell acts in response to influences from solid, fluid or gaseous bodies. All that can be smelt, which is chiefly gaseous, though occasionally brought upon the wind in minute particles, is conveyed to the nose by means of the breeze, draught, or radiations. In the interior of the nose there are certain special parts, the olfactory centres, to which the olfactory nerves are conducted in large numbers. It is not yet known how the scent acts on these olfactory centres; but it is certainly taken for granted that those scents that are conveyed to the nose break themselves up against the damp lining of the mucous membrane of the interior of the nose, and thus an irritation of the ol-

factory nerves takes place. All animals with a keen sense of smell have accordingly always damp noses. If the nose is extremely dry, — long continuance, and especially work in very dry air, chills and fevers, rises in temperature after a heavy meal (*dyspepsia*), and in the commencement of the period of heat, (in the case of bitches), can bring this about, — this effects more or less the sensitiveness to impressions received by the sense of smell.

“Eye-animals” that we are, if we do not recognise an object sufficiently well, we stare at it and examine it the more intently. The dog, on the contrary, if he wishes to procure for himself a greater clearness of perception, inhales the air in short quick gasps so as to satiate the interior of his nose more completely with the substance for scent and then it is breathed out in short jerks so that he may blow out the little particles of the dust etc. that have been drawn in. The dog gets rid of the larger particles of dust, which penetrate and produce a sharp and biting sensation, by sneezing, just as our eyes get rid of foreign bodies by crying. And just as our eye is continually in action so as to inform us of all that takes place in the world around us; so the nostrils of the dog, which are in constant activity, draw in the vapours which are floating in the air, and convey them to the interior of the nose. When a scent is thus brought to a dog which interests him, he throws up his head and sniffs in the direction of the current of air; he stands up on the ground so that he may all the better smell the scent coming from thence, just as we, in order to see more clearly, bring our eyes nearer the object of our inspection. And just as a tired man, whose eyes have conveyed too many sense impressions to the brain, deteriorates in his receptivity and powers of reflection and can no longer draw conclusions from what he sees, so too it happens in the case of an over-wrought dog; his sense of smell diminishes or breaks down altogether, or gradually, in the fulfilment of his duties which depend mainly on the activity and the quality of his powers of scent.

Every dog has a “nose”, that is to say, every dog has a sense of smell. Without it he could not live at all, — sucking pups whose olfactory nerves are severed find their way no further than to the teats of the bitch —, he could not breed. But it is something quite different when the dog knows how to turn his powers of scent to good account for us. Therefore, and because, we men in general can only give a very unsatisfactory explanation of such knowledge and thinking through the nose; we find it very hard to judge correctly of the power and activity of the nose of the dog, especially, as we saw before, since this power depends on those circumstances, partly internal and partly external which influence the dog; about which as yet we have not sufficient information. To-day we have not a sufficiently certain starting point for deciding from how great a distance a dog can pick up a scent; indeed, in my opinion, I do not think that we shall ever arrive at this knowledge because, as already implied, in the word “Wind”, it depends not only on the

direction, but also on the strength of the current of air. The question as to how old a scent must be before it escapes the nose of the dog is also relevant. Here we must take into consideration the kind of ground, the traffic over it, the use which is made of it, and the way in which it has been worked; and then there also enters into the calculation the question as to what grows upon the ground, with what it is manured, and further, the humidity of the air and of the subsoil, the airpressure, wind, weather, and the time of the day. In one case, — it was reported by O. Bühring of Cattenses about Othnar von der Ricklingenburg 65.286, — it was proved that a dog could recognise the scent and the approach of an acquaintance over a distance of 350 yards; but we do not know whether it could not be transmitted from much longer distances, if the conditions of the ground and the wind were more favourable. According to "Wild und Hund" it has been proved that hunting dogs pointed at partridges as distances from 220—330 yards, although their height in the air is not so great as that of the upstanding man, and consequently does not command such an area; we know also of dogs working on tracks that were from 10—12 hours old, and in some cases considerably older, but we do not know if this represents the absolute limit of their smelling power. Above all, we do not always know whether, in cases where dogs failed to pick up the track, and that too sometimes even a fresh track, the fault lies with the dog and his power of scent; or whether he was not put on the wrong track, or was trained in the wrong way, or if it was impossible to judge if, in that particular case, the dog could work with his nose; i. e. follow the track. We present-day men are unable to form a correct idea of any powers of the animal, based on scent, for we have short circuited this sense in ourselves, so to speak, and it has never reached a very high degree of development with us. This in many cases is a blessing in disguise, for anyone who is still the possessor of a sensitive nose will agree that it can cause us excruciating pain. At all events, there are still among us, civilised people though we are, many that are naturally endowed with a fine "nose", which perhaps subconsciously serves as a means for conveying likes and dislikes to ourselves; through which we become aware of the peculiar smell of ill-people and illness, and which must often help our tongue to judge the quality of our food. Savages verify with their nose whether earth heaps have been visited by their quarries. In Breslau, in the last century, there lived a "thief-smeller" who smelt out criminals and convicted them, just like a police dog with his nose. I was told by someone from a Home for the Blind that the children always recognise their teacher by smell. It is therefore obvious that in this case, as with the "nose animals", the sense of smell has taken over the duties of the lost sense of sight. In man the power of perception for one and the same scent very quickly diminishes, and it is a blessing for us, because otherwise we could not stand for long the stench in an unventilated room. Whether the same is true of the dog, I do not know, but I doubt it, and I prefer to believe that he always perceives the waves of the scent in

full strength, just as we can gaze at one and the same picture for a long time without becoming dazzled. In the same way that we are able to reproduce in our mind the picture of what we have seen, a dog is probably in the same position with regard to what he has smelt, while vice versa we can have no "scent-pictures" and are hardly able to find any description for them. That is why in mental cases we very seldom hear of deception with regard to perceptions through the nose.

Dr. F. L. Schmidt has made some tests, and proved the almost fabulously wonderful powers of memory possessed by dogs. These numerous tests were made with different dogs under the strictest conditions, both as regards himself, and his subjects Wächter von Sondermoning 2.474 PH and Nixe von Stralsund 5.233 PH. For instance, he made his dog find hidden objects in his own room, a place which was a thousand times impregnated with his own scent, of which objects the dog had only had a very short sniff before the trial, and which, under the circumstances, he was only able to discover by their actual scent*. It can also only be attributed to the nose memory of a dog, if he recognises his master after a long time. The old intimate smell reproduces past memories. The ancient Greeks already recognised this trait. Homer tells us how, after twenty years of war and wandering, Ulysses finally found his way home and was recognised by his old dog. Granted, for the sake of argument, that the entire story is a poetical myth and that twenty years are a little too much for the dog, the very mention of this recognition is an argument for the possibility, when we bear in mind the general reliability of Homer in his description of animals. Every dog-lover has already doubtless made similar observations.

The dog uses his nose also to test the reliability of his other senses. If his ear has conveyed to him the perception of a noise, he turns his head in that direction in order to sniff in the scent, as much as possible, just as we ourselves turn our heads to test the reliability of our hearing by means of our sight. The children's toy mentioned previously was first discovered by the eye, while the nose had to make sure whether it was alive or lifeless, harmless, or an object of suspicion. The "Hell" which I had during the war gave me a very interesting proof for this fact that the main sense serves as the final court of appeal. In my Headquarters, there was a dark passage which led from my private rooms to the offices. One day when I passed through this passage, a bright ray of light from the sun which was almost setting, passed through the keyhole of a door into the darkness of the passage, painting a bright golden circle on the opposite wall about the size of a half a crown. The bitch, who was ahead of me, started back at the strange appearance, ran up to it, sniffed at it, declared it to be harmless, and went on her way. When she was scenting, this bitch, who moreover possessed a most excellent organ

* Compare also "Verbrecherspur und Polizeihund" or "The tracking of Criminals by Police dogs" by Dr. F. R. Schmidt, published at the Verlag des Vereins für deutsche Schäferhunde SV 1910.

of smell, literally poked her nose into everything possible. When after a short separation, she found me in my room, she stodged her nose into my hand, to announce herself and at the same time to test whether I were really the right man. She did the same, still more insistently, when she had to pick me out from many others in the open. Eye and ear certainly gave her the general directions, but the test with her nose was the crucial proof of recognition. She did the same with regard to the horse and carriage, whether they were travelling alone in the street or in the transport train. Every time she found her way back to it after an excursion, she sniffed in the air to convince herself that I was sitting in it; but she never bothered herself about my adjutant. Whenever I was riding alone or with others, or even crossing the fields where the horses were feeding, she sniffed in the air on my return after a short absence, and to do so, came as near under the horse's tail as possible, which proceeding provoked many a violent remonstrance from the horse, which, however, she always cleverly avoided by ducking.

Whenever dogs first see their pictures in a mirror, they always start, but they immediately test by further investigation with their nose whether the reflection is real. Sometimes they look behind the mirror if possible, and then always contemptuously turn away. It only happened with my one year old Frodo von Grafrath 49,997 when he came into a room for the first time that I saw, when he looked into a mirror hanging on the wall from an angle, that he invited the strange dog to play, by little whines, wagging of his tail etc. One of my relations, one day during Carnival, entered my room wearing a mask; he was immediately attacked by Audifax, but fortunately when jumping at him, he recognised the well known scent and tried to make amends by all the greater display of joy. I myself have often enough had the experience, when I came home in unaccustomed clothes, or in an overcoat and the wind was blowing in my face, to be savagely barked at and even brought to a stand by my own dogs. The strange appearance made a stronger impression on them than the well known step; and only when they came nearer, at about 15—20 yards, did the guardians become doubtful: from the front they were still questioning, while from the back at the same time, they had already had begun to wag their tails tentatively; but that was only after I had come within effective range of their noses, or when they heard the sound of my voice. The ban was at once lifted and they gave free rein to their joy. Clever dogs in such cases know very well how to get the scent by making a half turn.

During sleep also, the nose, as well as the ear, still functions on the qui vive. "Kosmos" reported some time ago on trials that had been made with dogs that were tired and asleep, in German South West Africa. When beasts of prey, for the hunting of which they had been specially trained, were carried past them in the wind, they all immediately jumped up ready for warding off or attacking; while they continued fast asleep, when, in the same manner, the scent of domestic animals was conveyed to them.

The dog knows just as well how to read the book of Nature opened before his nose, as we, when we observe it with our eyes. The scent carried to him by the ground and the air continually conveys information to him about all that happens in his neighbourhood and also, — an advantage when compared with what is apprehended by the eye, — tells him what has occurred some time previously, (limited indeed, but comparatively long ago), at that place. This is a great help for the beast of prey who must find and pursue the tracks of his quarry, especially as this track, once he has found it, tells him a great deal more as well. If it happens to be the track of a quarry, it gives him information about the kind of animal it is, and its approximate age; and further, it tells him whether the pursued animal is in full strength and health, wounded or ill, — which then would be an easier prey, — and finally, shows him the direction in which his prey has gone. If a dog discovers the track of a man or an animal, he will always follow it, after a short test of the track (by sniffing), towards the goal and never in the direction from whence it came. This is an obvious necessity for an animal that must find its prey by tracking it out. I can find no other explanation for this than the following: every animal, stepping, running, jumping, or hopping on the ground, just as a man on the march, presses the front part of his foot, claw, or hoof, more firmly into the ground to give himself purchase when advancing. This can easily be seen on a soft soil in all tracks, whether of man or animal. The point of the foot therefore remains in a somewhat longer, more intimate and closer touch with the ground as compared with the back of the foot, and therefore no doubt, the scent of the fore-part of the step, which lies in the direction of the path of travel, will adhere to the ground more perceptibly than that of the hind part. From these "weak-strong", "weak-strong" etc. of many steps, the dog, with his nose on the track, close to the ground, recognises the direction of the advance of the one who originally made the track.

Tracking with the nose close to the ground, — slow and hesitating when the scent is weak, but confident when it is fresh, — is the primitive and peculiar way in which the dog follows. A dog who works in this way is called a "track-tracer" as compared with a "high wind-seeker". As a track-tracer, the tracking wild dog finds the tracks of his quarry on the ground and follows the scent which he has found. In special cases he also takes the high scent in the wind, especially when chasing after larger game; when he comes nearer his prey, or when, in the open country, the scent is carried to him by the wind Large game is at last followed by the eye. Our present day high wind-seeker, the pointer, is a production of human contrivance, but developed from the primitive characteristics of the dog in the same way as the shepherd dog. I have already given the description, furnished by Herr Löns, of the drawing-dog's work of a shepherd dog, which is the most difficult of all track findings, and which capacity is an excellent proof of his super-efficient nose.

Next to the smell, hearing is no doubt the dog's most acute sense. I have already previously spoken about the fine power of distinguishing tone and intonation, but his sense of perception of soft and very distant noise is equally great. It goes without saying that our crop-eared dog, who can move his "funnel-shaped trumpet" in all directions must have a much more acute power of hearing than a dog with pendulous ears covering the orifice. The hearing, like all other senses, is naturally developed to different stages of acuteness in various animals; moreover it declines with advancing age, just as the eye. Many dogs are sensitive to Music which they always accompany with loud howling. I suppose it is less from a desire to join in and take a part, than from a real pain which compels them to do so; especially when shrill sounds, squeaking harmonies, or blasts from wind instruments strike the drum of their ear. My present bitch is insensitive to a song or to the piano, but as soon as my wife, for fun, takes one of my old Cavalry trumpets down from the wall and attempts to blow into it; Hell, with much painful wailing, pleads with her for mercy. So far as the inevitable gramophone is concerned, I have not been able to observe anything extraordinary with any dogs, whether instrumental pieces or songs were played; on the other hand, a new dog, which I had, barked furiously into the funnel of the gramophone as soon as he heard, for the first time a recitation coming out from it; he found this voice without a man entirely against all his ideas of order.

Sight is generally considered the least developed of the three principle senses in the dog. It is, however, by no means weak. According to Berlin, dogs are mostly long-sighted, i. e. they see badly at close ranges, but their sight is good at a distance. This assertion will be confirmed by every keeper of a shepherd dog, especially in so far as the seeing of moving objects is concerned. My present bitch recognised a squirrel jumping about in a tree, at a distance of 32 yards, and that too with her eyes, as the wind blew in a different direction. The Hell I had at the Front was able to see cats running in the street at a distance of more than 44 yards, and recognised a small white foxterrier, who came running towards us in a field, at more than 165 yards distance. I myself have observed that a military service dog gave tongue on the approach of a group of men, among whom he might possibly find his master, at a distance of about 500 yards. A most reliable service dog trainer, Senf from Mügeln, reported that his Cenzi von Klösterlein 11,151 PH called his attention to a potatoe thief, who rose up and bent down again, at double the aforementioned distance. I am, however, not certain, if in that case, scent did not play a part as well; on the other hand, my war bitch did not recognise a cat that was lying quietly against a closed window when only two yards away, not even when I called her attention to it and led her to the particular window which was only a yard above ground level. As soon, however, as the cat made a movement she immediately knew what was the matter and tried to jump at it. This is confirmed by an old huntsman's experience that game, even when on the alert

do not recognise the hunter, if he lies still, and will run up to within a few paces of him. Staby explains this as follows: "Man and ape have eyes in front, with a common field of vision for both; they can therefore see objects in relief, can estimate distances, and can see at different angles by moving the eyes without moving the head. Animals with eyes at the side of the head, and that is the majority, have an extraordinarily wide range of vision on account of this, but cannot see as well as we in relief, because the fields of vision of both eyes only coincide to a very slight degree, and their recognition and estimation of distances thereby suffer, while, on the other hand, they surpass our power of sight where moving objects are concerned. Dogs have not their eyes placed so much to the side of the head as, for instance, "fur" game, but on account of their lack of eye muscles, they also have only a very limited power of estimating distances. Experience, however, seems to contradict this statement, because dogs, (as well as wild dogs, when hunting and overpowering their prey), in running and jumping, as well as in every movement, know how to estimate distances and to act accordingly. Moreover, when judging of the power of sight possessed by our dogs, we must take into consideration the fact that an animal, whose eyes are only about 20"-22" from the ground, has, by that fact alone, a much more limited field than an upright standing man with an average height of 5 ft. 10 ins. and also that this restricted field of vision is generally still more limited by the growths which cover the ground.

Edinger reports that his bitch recognised people in the street at a distance of 30—44 yards. According to my own observation, this faculty of recognition by the eye alone, without the help of nose or ear, is considerably less, if it is not favoured by special conditions. Well-known surroundings, inside of which the recognised person moves about habitually, perhaps even with well-known or calling motions, may assist in this recognition; and even then, the nose may finally have been brought into action, consciously or unconsciously for final confirmation.

In one respect at anyrate the sight of the dog surpasses the eye of man, that is in its capacity for seeing in the dark. One has only to observe with what certainty our dogs chase through the forest and the wood in the darkest night, without injuring themselves or dashing against obstacles. The pupils of the dog's eye grow very much larger in the dark; they push back the iris to a very thin ring, and reach nearly up to the socket of the eye, making the eye appear much darker than during the day. Like many other night animals, they owe this faculty of seeing well in the dark to a very thin white phosphorus-like layer behind the iris, which has reflecting properties, throwing back every particle of light which falls into it and thus considerably magnifying the power of the light. This layer, called the "screen", also makes the eye to glow in the dark. Some members of the cat and the dog family exhibit this to an extraordinary degree, especially the wolf, whose "search-lights" glow in the dark like burning coals. We can observe the same in our sheep-

herd dog, although not in a totally dark room. There must be a source of light, the rays of which can be reflected, and the weaker the source of light, the weaker too will be the glow in the eyes. This appearance, which in former times was inexplicable, is no doubt the reason for so many legends which were spread far and wide, telling of monster hounds with large flaming eyes which terrified the traveller at night. They must have been harmless dogs on the prowl, or perhaps sometimes, wild dogs, whose eyes reflected the light of the moon or of a distant house with lighted windows, or that of a torch or even the lamp of the wanderer himself. If then he trembled and retired, they would press after him, as dogs naturally do "with a gruesome bark" by which they added to the gorgon terrors of the spook.

We know very little, or to be more correct, nothing at all, about the dog's powers of sensation or the sense of touch. The beard or "feelers" which are found on animals which skulk and crawl at night, and which they use to try whether they can pass through small openings, are only very weakly developed in our dog. Generally speaking, just as in the case of ourselves, sensitiveness to outside irritations varies among dogs as well. To one, the presence of a flea as a neighbour throws him into a transport of fury; another on the other hand, will allow himself to be a regular flea-pasture which will scarcely ever disturb his repose. Over-sensitiveness, which is always a sign of weak nerves, is a bad quality when met with in our dog; when on duty he will allow neither the irritation of fleas, nor the itching of worms in the anus, nor the buzzing of flying insects of all kinds to interfere with his watchfulness, nor with the carrying out of his duty. We cannot set great store on the sense of taste in the case of the descendant of the beasts of prey, who is accustomed to gorge his stomach quickly with large lumps of meat. Just as with the eyes, so, in the case of the dog, the sense of smell, adds materially to the sense of taste; he smells the food offered to him, and his mouth waters at the same time. The saliva will hang in threads from his mouth, but this is not so observable in the shepherd dog with his fine firm tightly-drawn lips as in thick-lipped animals. Meat of all kinds, decayed, or even previously "digested", gives the greatest gastronomic pleasure, and need not always be the flesh of warm-blooded animals, while no dog will ever pass by a bone, no matter how bare it may be. Some domestic dogs eat fruit with relish, which taste is inherited from their ancestors. In the time of the cherries, my dogs like best of all to lie under the trees and wait for the cherries which the jays and the starlings let fall; plums and sweet pears are similarly always appreciated. The bitch which I have at present will eat all the apple peelings, and these too in this year of bad crops of all kinds which are not very sweet, and she does this, not out of necessity nor from scarcity of food, but as dessert after a good meal.

Generally, the dog who lives in the house has become an eater of all and sundry, and accustomed to all our dainties. In cases where we do not offer him anything which is necessary to the well-being of his interior economy, he will procure this stuff himself, even when

well fed, by some natural subconscious impulse and thereby exhibits to us an apparent perversion of taste which is unintelligible and revolting. He eats, entirely and whole, with hair, skin, and bones what he gets as the result of his keen instinct for hunting small quarry. My Hell will eat every squirrel, warm as it falls from the tree, — so that she may enjoy the fresh blood with its salts; — and she goes to the decayed pieces on the refuse heaps. She will not disdain carrion, and at times will eat human and animal excrements, and drink indiscriminately, without any danger and just as willingly, from filthy and stinking puddles as from the fresh clear spring. Old bones, stale meat, carrion, animal and human excrements were already the regular meal in the days of the wild dog. Not every hunting day was a catching day; hunger is painful and teaches him how to employ substitutes. Along with, and even as the result of, his taming, the dog generally remained true to the traditional menu of his ancestors. Dogs that are badly kept, and especially those street dogs in the East who have only half a master or no master at all, feed even to-day in a similar way on the refuse which is thrown away. They have therefore, in company with the vultures, become very useful street scavengers and, in a manner of speaking, municipal sanitary inspectors. Indeed they not only eat, but unfortunately they digest very quickly as well, and that remains lying in the street. Accordingly, cleanliness and wholesome smells in Oriental streets are still, to a certain extent as yet, a consummation to be most devoutly hoped for. The dog may require decaying stuff as a necessity to promote good digestion; excrements probably may have this effect, or serve as a substitute for meat and salts. Dry horse dung is "taken", even as grass, shavings, mattress fillings and similar things to clear out the stomach and the bowels, i. e. to remove all the painful and injurious contents such as bones and also worms. Most often these remedies are entirely successful and vomiting follows almost immediately. Some dogs will again take from vomit the food which seems to be still eatable. As a rule, healthy and reasonably well kept dogs are good eaters. If this is not the case, then the dog in question is ill; he is liable most often to attacks of indigestion, worms, and tooth troubles; but if he approaches his food in a "perniketty" way and looks askance at it, and fishes only a few of the tit-bits out of it, he is spoiled through faulty and senseless training and keeping. "Hunger is always the best sauce"; if that does not do any good, then we should kill such a coddled over-refined animal as soon as possible; he is useless both for breeding and for work.

Let us now examine the bodily adaptation of our dogs for their particular work, and we shall see that, thanks to their past history, their natural development, and their keeping, their possibilities of usefulness are very great. The shepherd dog as a working dog does not lead a very leisured life. Hard work is indeed demanded of him, and he must discharge his duty in all kinds of weather with the utmost energy, whether it be in the burning sun on the heath,

where there is absolutely no shade, or on the bare hill side, where he has no opportunity for quenching his thirst. He must stand firm in the pouring rain, he must allow the thunderstorm to break over him, and finally he must find his resting place underneath the shepherd's cart on the damp and rain-soaked ground. He must be equally proof against frost and snow. In many parts of Germany, in the North as well as the South, pasturing in the open during the winter is still customary. I know of shepherds who will not use a single bundle of dry provender during winter, and, who will never come to the barns with their sheep, even during very sharp frost when the temperature is 15° C. below zero or more. In such cases, the dog must remain in the open, and sleep under the shepherd's cart. In parts where winter pasturing is not the general rule, the sheep are, nevertheless, driven to pasture until far into the Autumn, and, when the snow will permit, until early Winter. It is therefore clear that our shepherd dog must be a weatherproof fellow, who will stand the heat of summer, and the cold of winter, equally well. Moreover, he must be very easily satisfied, for shepherd's food is scanty.



Fig. 207. On the open pasture.

His vocation forces our dog to scramble through brambles and thorns and to jump over ditches, hurdles, and hedges. No obstacle must be too high, nor too broad for him; he must find a way to pass them all. If he cannot jump over them, he must climb over them, or wade or swim through them. During sheep-dipping, the working dog must go bravely into deep water, but generally he is a good swimmer and likes it.

Our working dog must not only run over the hard broken ground, but over the prickly stubble; he can avoid neither the sharp rolling stones on the mountain pasture, nor the fresh layer of unrolled flints on the country roads. All this demands and makes impervious pads, hardens the dog, and fits him for every kind of work. There are dogs who will not remain lying in the ditch howling, whenever a wounded pad almost drives them mad with pain; nor when



Fig. 208. Herold von der Hürde SZ 27001 HGH.

their tongue cleaves to the roof of their mouth. Indefatigable, always zealous for duty, always attentive, always ready to serve, such is the character of our shepherd dog.

"Mens sana in corpore sano", may be said of our dog who has a body which is a fit servant for such a character. In the First Chapter, we saw that the shepherd dog possesses the trotting build of the wild dog, which makes him so fit for perseverance and for high efficiency, and which has been trained by purposeful breeding in several directions to become still more efficient. Unfortunately, statistics have not yet been gathered to prove what distance a dog with the flock covers during a day's work. My military service bitch during the War covered most of the time a good 32—43 miles every day, running behind my horse or my carriage. Occasionally she did considerably more, and never showed the slightest fatigue in spite of the fact that, after the manner of dogs, she mostly doubled the distance

by running to and fro, adding to it yet more, by galloping after crows and by exploring the country. When the horse too was put into a sharp trot she was able to keep step with it over long distances, without ever galloping, or getting out of breath. Of course she utilised every available opportunity to drink, which at times however, was very rare, but when she did drink she not only lapped up the water, but

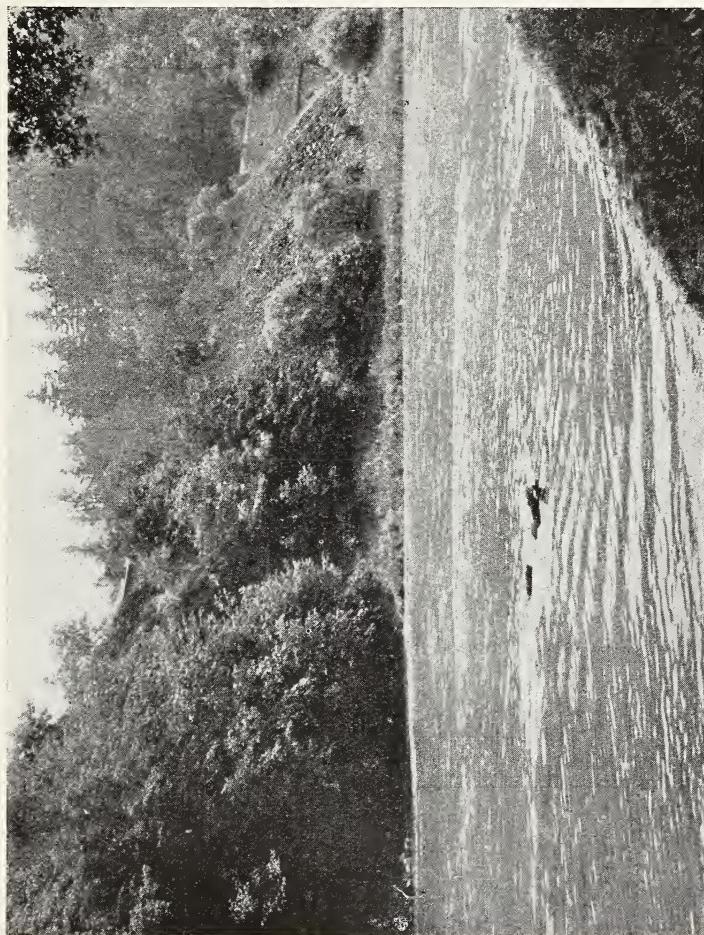


Fig. 209. In the water.

scooped it up, when the depth made wading possible, with her mouth wide open in the water. I know of a similar cases of endurance when dogs ran behind a bicycle. Just before the Tending Competition at Magdeburg in September 1919, the 9 year old Herold von der Hürde 27,001 HGH had to run for three hours behind a bicycle in the blazing sun. He then took part in the Competition quite fresh and full of keenness, and had again to return, trotting, for a good three hours in

order to get to work at once. But the good well-knit trotting build was conspicuous in this fine old gentleman.

Just as the wolf is not only an enduring trotter, but will on occasions, (as for instance when following a sledge), maintain a good long gallop, so too our shepherd dog can do the same. Anyone who



Fig. 210. High and Long jump.

is a judge of build and gait will have no doubt about this when looking at the good poise of his limbs, and observing the flexibility and power in 'all his movements. I have seen military service dogs that ran a distance of about three miles in seven minutes while conveying a message, which works out, when one includes the short stop to

deliver the message at its destination, about 650 yards a minute, and which is a very sharp hunting gallop for a horse. Another dog covered three miles in fifteen minutes, but, on the way to and fro, he was obliged to cross a flooding torrent, which was about 60 yards wide, by swimming.

Our dogs will also do wonders in jumping and climbing and in many other exercises of agility. A high jump of over five feet, and a long jump of considerably over double the distance is nothing out of the ordinary. They know, as well, how to jump up, or to climb rough brick-work, and even smooth boards more than nine feet high; and as soon as only one of the front paws has caught on the upper edge of the obstacle, the whole dog will be sure to follow over. Thanks to their physical agility, our shepherd dogs make very good pupils for training in all kinds of tricks; and they will, on occasions, follow a criminal up a ladder and on the roof of a house, or climb after him from branch to branch in a tree, if they can only reach the first branch at a jump. When suitably trained, they become most surefooted mountaineers.

Many a brave shepherd dog has also saved children, and even adults from drowning; thus Unke vom Lande 7,425 saved the little son of her owner Herr B. R. Greiner of Rochus near Neisse, on the 1st of June 1909, after a hard struggle when the child was carried right out into the swollen current of the Neisse, which was in flood. There



Fig. 211. Clearing a fence 4ft 10½ ins. high.



Fig. 212. High and Long Jump 9ft. 9 ins.

was also Odin von Nordalbingien 5,444 belonging to chief petty-officer Richter of Kiel, who, on being ordered, brought to land

a drowning stevedore, whose boat had capsized about 60 yards from the shore, and who reached the unfortunate man before Richter and the other people had succeeded in unmooring a boat to go to his assistance. Scarcely had the dog recovered a little, when he again jumped into the water to fetch the capsized boat as well. Further, our dogs not only rule on earth and in the water, they wish to conquer the air too. Quite recently Police dogs with their leaders have been conveyed in aeroplanes to places where they were to catch profiteers and smugglers.

The physical equipment of our dogs, and their suitable covering of stiff smooth hair with thick underdown make it possible for them to preserve their efficiency in all parts of the world, and in all kinds of weather. The colder the district in which they live, the thicker and woollier will be their coat. Dogs who do not come into a warm room in the winter, — and that does not harm a shepherd dog so long as he has a dry windproof kennel, — acquire a genuine belly mane to protect what is otherwise the less hairy part of the body. During the warmer parts of the year the thick underdown "moult", but grows again very quickly although at first it is only a light down.

Fig. 213. Scrambling over a wall about 10ft. high.

Now the underdown imprisons a thin layer of air over the skin which, because it is a bad conductor of heat, protects the dog against



loss of warmth, and from an overheating from without as well. Therefore our shepherd dog, (naturally after a period of acclimatisation, when the weaklings will go to the wall in unfavourable circumstances), can also settle down in a dry and steaming atmosphere, can breed,

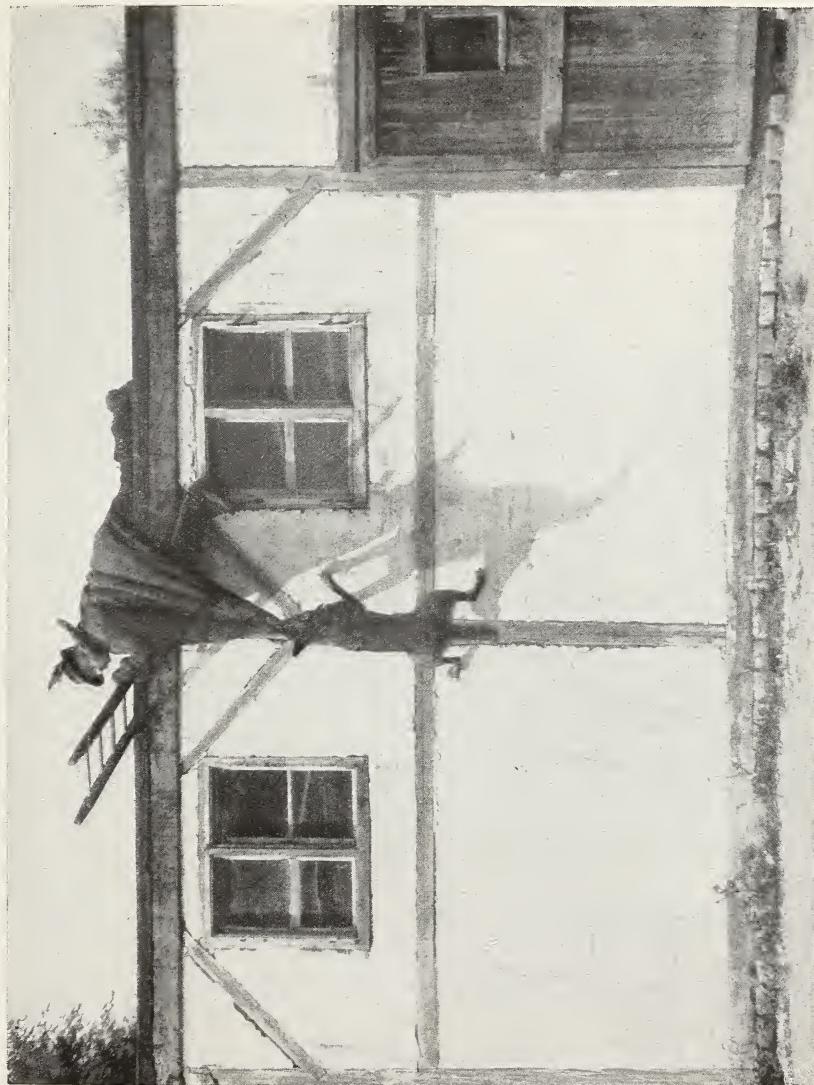


Fig. 214. Pursuit.

can prove himself serviceable, and retain his powers of scent. During the War, our military service dogs were stationed even in Macedonia and did splendid work there. Whoever can do this has proved his own adaptability to any climate. Calculations made by aviators

in those parts have shown variations in temperature from 25 degrees below zero in winter, to 63 degrees Centigrade in summer. During the hot seasons there were often weather disturbances, when the temperature suddenly fell 30—40 degrees, during sand and dust storms. The country, with the exception of a few extensive river valleys, is very hilly; there we find mountain top after mountain



Fig. 215. Up the ladder.

top, interspersed with small ravines which are mostly bordered by precipices. In addition, all is barren and desolate as the result of a former senseless deforestation, the scorching summer sun, the Balkan storms and the depredations of the mountain goats. At the foot of the slopes are bushes as high as the knee or the thigh, such as the holly oak and other thorny and prickly growths which are the only things that can live in spite of the goats. In between,

there is the very sharp spear grass which grows almost as high. Where there are not glistening hard rocks glowing in the sun, the ground is all covered with small sharp-edged hard, loose shingle against which even the hard naturally tanned bare soles of these shepherd



Fig. 216. Circus tricks.

children cannot hold their own. In addition, there are dense swarms of flies, and other stinging and tormenting insects which give no peace by day or night. Against such, the hard thick hair of our shepherd dog is a most suitable protection, as also against thorns, spear

grass, reed grass and barbed wire. I have often examined dogs who had squeezed themselves through this barbed wire without being able to find any damage to the skin. The flies can, no doubt, terribly torment our dog on his head with its short hair, especially about the ears. Herding dogs, who must work in districts which are particularly infested with flies, have, in the second half of the summer till the flies die, no hair at all on the points of the ears, and the edges all bloody and inflamed, and even gangrenous in some parts, which is a result of this often repeated and wholesale attack of these bloodsucking and stinging tormentors. Rain drains off very quickly from their hard, thickgrowing long hair, which is



Fig. 217. Football.

lubricated by the sebaceous glands, while the dogs always get rid of the superfluity of moisture by a timely shaking. Yet, even if the rain continues for any length of time, or when swimming, the dampness does not penetrate to the skin, thanks to their thick intertwined underdown.

Each family of our domestic dogs has its own hallmarks, not only in exterior features, but in character as well. The most original hallmarks and those which are valuable to us have survived and have been developed in our shepherd dogs; but even within the same family the individuals are not "apples off the same tree", for just as the race is the result of evolution, the training produced by their life, and the pursuit of their vocation, so also is the individual

dog. I have already described the racial talents, the origin and foundation of the shepherd dog character in the first Chapter, and in the previous paragraphs of this. The trainer must develop to its highest perfection, — provided the breeder has done his duty, whatever the individual dog possesses as a natural endowment physically and mentally. "Like master, like man" says the proverb, and thereby expresses the fact that man makes his impression on his surroundings. If anything in these dependents of man displeases us, it is only man's own fault.

Thus the dog is the reflection of his master; the foundation is laid by his trainer. It is quite possible for a later owner to develop and extract many other traits, but the basic foundation, i.e. confidence and absorption in the will of his master, must be laid down from the very first moment. All the wonderful qualities of character possessed by a good shepherd dog will therefore only be brought to light when he remains in the same hands for a very long time, preferably from puppyhood, where having obtained a footing in the house, he shares the joys and sorrows of the family, their work and their duties. Here then is formed the intimate relationship of confidence which so often makes us see human features highly developed in the actions of the dog. Here the animal's conduct is ennobled by an understanding and loving humanity. Freedom of movement, which makes dogs change their place, like servants, is favourable neither to the development of their characters nor of their faculties: and our dog is completely ruined in mind and body wherever he is treated only as merchandise, (which, indeed may have a high monetary value as such), or when he is regarded as an adjunct to feed vanity. The Internationalism of the Big Bank Balance has been a curse for the shepherd dog as well as for other things.

Our shepherd dog is a peculiar fellow and a genuine German withal. Superculture, and too intimate contact with modern



Fig. 218. 13 ft. above the ground.

"Civilisation" spoil him. He will thus become "staple goods", a "Society pet", and will lose his real "Ego", and the personality which we esteem so highly, in our working dogs, in its earnest and brusque self-confidence, because they are real Nature. If therefore we transplant this dog from a hard but wholesome country school, and from his native home into other surroundings, we must take care that we procure conditions of

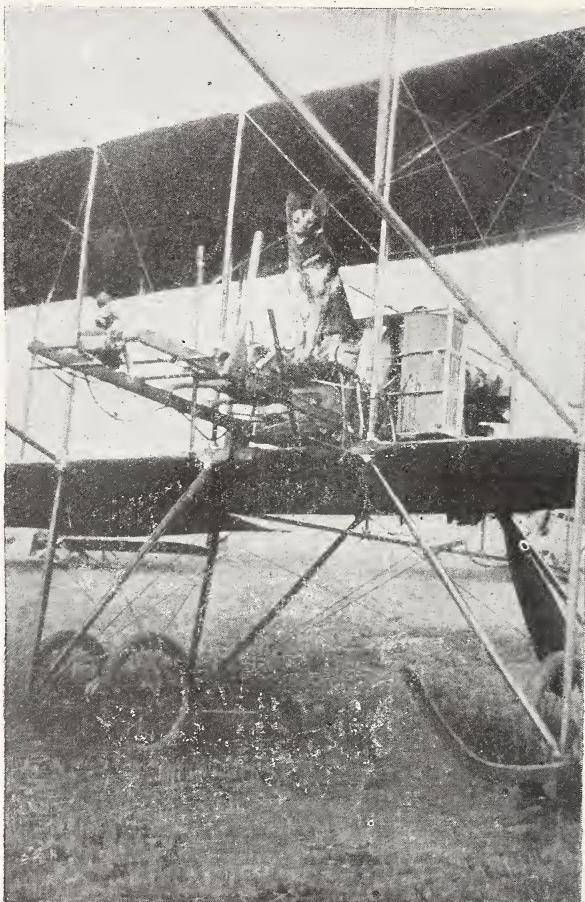


Fig. 219. Off for a trip.

life for him which correspond to his peculiar temperament. We must understand how to guide the active instinct of this vivacious animal into the right path, or else he will not be very much better than our country people when they are transplanted into the large cities; and what becomes of *them* is well known. Part of them, the majority, surrender to the ways of the town, that Moloch who feeds on men; the other part, the minority, comes through the trial, rises, some-

times very slowly by the work of generations, but sometimes too by a quick brilliant ascent. As soon, however, as the great impulses and inspirations have disappeared, the whole clan will sink down and become engulfed, father and children. I am sure that every real friend of the race will do his best to save our dogs from such a fate.



Fig. 220. Unke vom Lande SZ 7425 with Herbert Greiner whose life he saved.

Inactivity is an occasion for temptation, especially for able and clever men, who otherwise, when suitably employed, could do great things. It inclines them to all kinds of dissipation especially in the direction of wine, women and gambling. The pedant, however, is not endangered by laziness, his commonplace complacency is completest when he thinks of nothing. The same is the case with our dog. The lap dog and his like will be most at their ease when lying in their basket; our vivacious shepherd dog, on the contrary, longs for work;

he is grateful for all kinds of work, and, if unoccupied, will find a field for activity for himself which might lead him into all kinds of vices that are very disagreeable for us; as, for instance, poaching and roaming. Where such impulse for work with no legitimate outlet may lead, is very well shown by their getting "sheep-crazy", which mostly happens during the winter months when there is little to do, which can even happen to some splendid dogs occasionally, when they are not properly looked after during the summer. Whenever such dogs happen to get into the sheepfold or the stable with no shepherd or any other dog present,



Fig. 221. Jokel von Schwetzingen SZ 1861 in winter coat and belly mantle.

they may be sized by a sudden fad for work. The silly sheep will then huddle together in a corner in face of the overzealous one, or else run round in a circle like mad. In their panic they will then crush or trample under foot whatever falls or, is weakly. Therefore the dog in such cases is merely driven on by lust for work and only in the rarest instances by savagery, which is the result of a combination of unfortunate circumstances; as for instance, when several dogs together come across a fold and irritate each other, or when one of the sheep which he considers to be obstreporous be killed or made to bleed. On such exceedingly rare occasions, his original blood-

thirsty tendency, which he inherits from his wild ancestors, might overpower such a sheep crazy dog. But even in these rare instances, by far the greater majority of the victims are not sheep who have been injured by the dog, but those that have been suffocated by the panicy huddling together of the stupid sheep. Naturally, we cannot really blame the silly sheep altogether for their silliness. By reason of their domestication and unnatural keeping, they have been made stupid, and their natural stupidity has been increased; which is an urgent warning against the herding of dogs together in large kennels. Their conduct during the dog terror is nothing but a picture of the masses in their fecklessness; large crowds in similar cases behave only very little better; just think of a panic during a fire at a theatre, for instance.

Whenever the dog is kept in an enclosed kennel, — in order to keep him from doing any harm, or even not to suffer any harm, on account of his high monetary value, — he will not only degenerate physically, becoming stiff, sluggish and lazy, but will also become mentally torpid, and lose all his sharpness and vim. Unrestrained license, as the result of careless upbringing and laziness forced on him by indifference and confinement to the kennel, will cause the dog, just as man, to become thoroughly lazy, demoralised and deteriorated. The dog who is left at liberty to his own devices begins to resemble the wild dog, but if he is forced to fend for himself, he will at least be prevented from doing worse; while the dog who is kept in the kennel, on the other hand, is no better than a beast caged for show. The eager craving of the dog in the kennel to get out of such crass stupidity into liberty, into the presence of people, to be able to play and work causes, in these miserable victims of affection, a state of continuous exasperation which is especially noticeable, when the animal is allowed to leave the kennel once in a while. This constant irritation frets away their nerves; the acuteness of their senses will disappear, their mental activity and intelligence will be lost; just as a prisoner will show signs of melancholia and irresponsibility for his actions as the result of long confinement behind barbed wire or in the prison cell. Thus, kennelled dogs are liable, not only to become dull, but even mentally weak and mad; many of them acquire a craze for purposeless actions which sometimes cause bodily harm, and from the committing of which they cannot be prevented, because they must commit them.

Unfortunately these harmful consequences of kennel confinement do not show themselves all at once, for otherwise they would be easily recognised and remedied. When, however, such mistakes in keeping animals that have been torn away from their vocation and their natural conditions of life have been going on for some generations, and where such evil results of confinement have occurred unchecked, the consequences are inevitable and show themselves in disobedience, over-exciteability, neurasthenia and shyness. This shyness, which by reason of the circumstances in which it is met, is called "kennel shyness", has nothing at all to do with the watchfulness of which

I spoke above, and equally nothing to do with the mistrustful drawing back of the shepherd dog, which are natural and lawful impulses of the dog's soul, and are immediately suppressed when the occasion warrants it. The well-known habit of retiring seen in young dogs, has also nothing to do with it; even as the shrinking from the hand when somewhat roughly or wrongly treated during training. This is an indication of selfconsciousness which seeks to withdraw itself from the influence of strange constraining wills. Each may be compared with the behaviour of a young man from the country, who, taken from the loneliness to which he is accustomed, and planted into the life of a large town, is immediately bewildered by it. In both cases it is soon apparent whether it is a matter of incurable cowardice, or whether the natural boldness and recklessness will find a way of declaring itself. Kennel shy dogs can be savage, and spiteful biters, who, in hysterical anxiety for their pathetic little modicum of life wildly snap at anything. This courage of despair, and this biting from anxiety have nothing to do with the genuine energy and gallant precipitancy of a good shepherd dog. Kennel shy dogs mostly show themselves also as really weak nerved wretches which bolt, shivering and shaking, at the sight of a waving cloth, of traffic, or strangers; their apparent quiet dependence on their master is : but hysteria, and accordingly selfish weakness, for in times of danger they would be the first to leave him in the lurch.

Such shy animals are in all circumstances an encumbrance to their owner, who must be ashamed of such a dog, and of the disgrace they brings on their race. Under no circumstances whatever must they be used for breeding, however noble and striking they already appear to be outwardly. They should rather be packed off to the place where they belong as soon as possible, by knocking them on the head and flinging them on the dung heap. This sounds cruel, but I am speaking from the point of view of the breed; in the case of men, unfortunately, we are not do this, but must bring up and make a fuss of all the degenerates and the wasters; and now we see the results of so doing.

Such kennel shy dogs are no longer shepherd dogs, but degenerate wretches. We can find the meaning of the word "degenerate" in the word itself; it means a "throw out" from the race, the giving up of the purpose of the race, which is its life and its development. In the case of animals living at liberty, this degeneration, in the wider sense of the word, means the decay of the race. Gradually, haltingly, but progressively, and over a long time, this extended process of remaining behind other races is the result of an exhaustion of the power to live and the power to will, which belongs to the race, and never to a solitary mode of life. This is due either to a one-sided development, and, in that case it is a pitiless Law of Nature that continuous development in one direction, (although it may be so advantageous in many respects when regarded from the point of view of the whole), indicates no progress, but a standstill, and thereby already indicates the beginning of the process of remaining behind. Or, on the other hand, it may be the result of a development which,

successful up to a certain point, beyond which it could no longer adapt itself to these altered conditions of life, must therefore give up its own supremacy in favour of creatures that for the time being are still inferior, but have the capacity for further evolution. A glance in the book of Nature and the history of people will confirm this assertion. Superfluity brings satiety, and this in time brings stagnation, and stagnation brings deterioration. On the other hand, necessity brings only the listless and the weary to a speedy end; it braces others to a most intense exertion of their powers; thus fulfilling the preliminary conditions for their march to the heights.

We must now obtain a still clearer idea of the meaning of degeneration in relation to the domestic animal. Degeneration already lies in the province of the domestication of the race, operating on certain inborn conditions of life which results in the eradication of some of them, and a process which may be called a reduction to dependency. Therefore those animals which are kept in a manner of life most similar and adapted to their natural state are the hardiest, the healthiest, and the most fruitful. I have accordingly, in the past right up to now, always uttered warnings against keeping our shepherd dogs in kennels, and against a onesided breeding for beauty as opposed to efficiency. The shepherd dog is a working dog, he became so, and only as such can he remain a "shepherd dog"; for that reason we value him, and for that reason we love him. His abounding "joie de vivre" must be utilised, and he must be allowed to work even when kept by an amateur. When he cannot be employed in his proper vocation with the flocks, then he must work in another occupation which lies within his scope by means of his development. A substitute work must be found for him at all events, for if we demand no work of him in a manner useful to our purposes, he will seek to create a sphere for himself, and will very easily stray from the path of duty and usefulness. Such an activity which the dog discovers for himself very often brings harm to his owner, and is sure to harm himself too; the latter case is true only from our human point of view when he gets a thrashing, for "what's one man's meat, is another man's poison".

Beginning with the recognition of this fact that we can only maintain our dog race hardy and healthy, even in amateur breeding and keeping, when we allow it to go on with its work, the S. V. has laid down the rule that "To breed a shepherd dog is to breed for work", and has further based all its rules and regulations for the benefit of the race and its breed on this postulate. In order to facilitate for friends of the shepherd dog the carrying out of this fundamental condition, and especially as the amateur, (and in this case the amateur living in the town, who would very rarely and with great difficulty find opportunity for having his dog trained and worked with the flocks), the S. V. has found other ways and opportunities for the benefit of his dog by public and military service, for which the shepherd

dog, thanks to his evolution, is especially suitable, to the profit of the dog and the gain of the community.

The genuine and noblest vocation for the shepherd dog is, no doubt, tending the flocks and, as his name says, above all the sheep. I have already had occasion to say much about the tending service of the dog in the First Chapter, when I showed the gradual development of this service. I have also explained that this service varies according to the methods of working the soil, and have said what demands it makes on the dog in general. It is not necessary to mention further that the conditions of tending in such a large area as Germany cannot be uniform everywhere. Unfortunately the sheep, which is so useful for wool and mutton; which

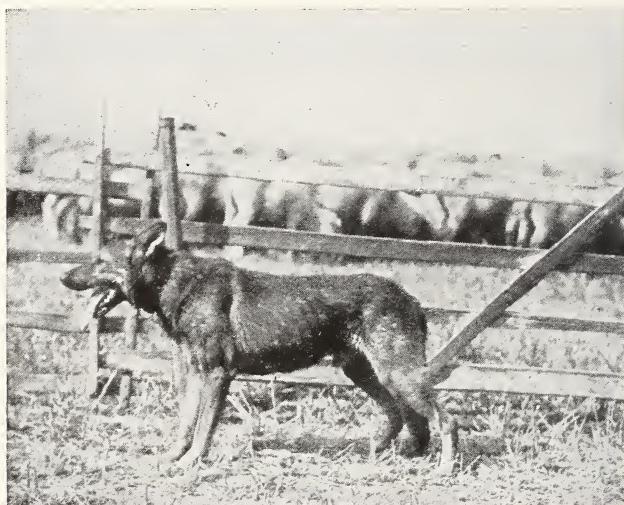


Fig. 222. Worad von Berta SZ 59381 HGH, Prize Tending Champion of 1919.

is so economical in its eating, and can use all kinds of food, had become before the War the "Cinderella of Agriculture". The introduction of fine wool-bearing sheep, like the Merino and the Electoral sheep, had given a great impetus to sheepbreeding in Germany, which attained its most flourishing estate about 1860, when it really became the "Golden Fleece". An increasing Agriculture which had been rendered necessary for the feeding of the rapidly growing population after 1871, but especially the ever growing and ever cheaper wool production of countries across the Ocean, South America, South Africa, and Australia, the improved means of communications with these parts, and the decrease of the requirements of the North American Market, all contributed to a large and sudden reduction in our sheep breeding, and caused the dissolution of quite a number of our large sheep farms. It is true that towards the end of the century, wool production in the

La Plata district diminished to a great extent and that the weather conditions, and especially a long lasting drought, destroyed enormous flocks in Australia, it is also true that the prices of wool on the North American Market rose, but in spite of all this, our national sheep-breeding declined more and more right up to the outbreak of the War, notwithstanding the warnings of many farsighted farmers. The majority relied too much on the promising development of sheep-breeding in our South West African Colonies. Events, however, have taught us a lesson, and sheep-raising therefore is bound to come into its own once more, for we absolutely require wool produced in our own country, that is cheaper wool. We need meat and our agriculture needs the valuable sheep dung which is brought into the fields directly from the folds and consequently also saves labour. Continuous stabling of the sheep, — which may still be useful for the



Fig. 223. Tending near the oak trees.

retention of the strength and the value of the dung — is only possible and usual on the large farms of Northern Germany; otherwise the sheep are driven into the fold nearly the whole year round and give back to the soil double and treble of what they have taken. Therefore the use of the fold is strictly regulated wherever village, co-operative, or communal sheepkeeping is the rule. Special pastures can no longer, as in former flourishing times, be reserved entirely for the use of sheep. At the most, some small strips of clover can be kept for the lambs on very large farms, or special sheep-breeding establishments. For the rest, we have only scanty pastures for the sheep, as, for instance, the heath, the waste land, the road-side, the fallow land, and the stubble and beetroot fields after harvest, where they may pick up what is left. In the beet-sugar plantations of Northern Germany, the only pasture for the sheep is generally the small strip of green bordering the narrow road between the beet fields,



Fig. 224. On the open pasture.

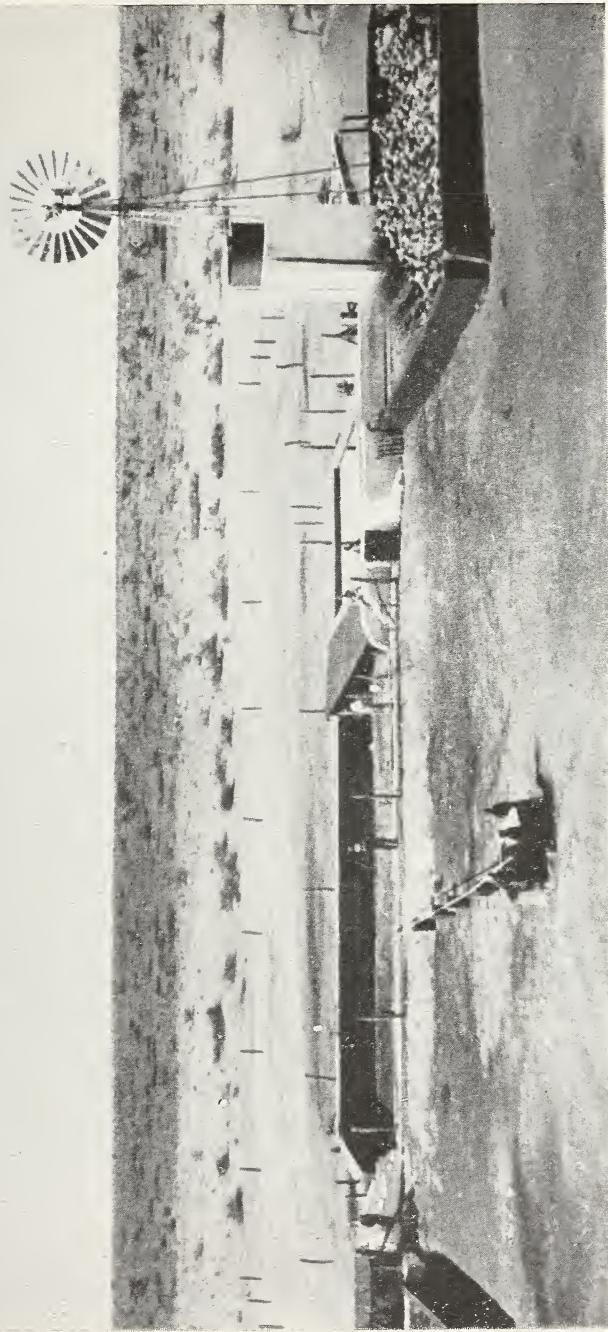


Fig. 225. Dipping bath near Klein-Nautas, German South West Africa.

and here the shepherd and his dog must be continually on the alert, as a bite in a beetroot is fined one mark. Such pasturing on the field paths is very similar to a University Examination for dogs and the shepherd though unfortunately it cannot be in-

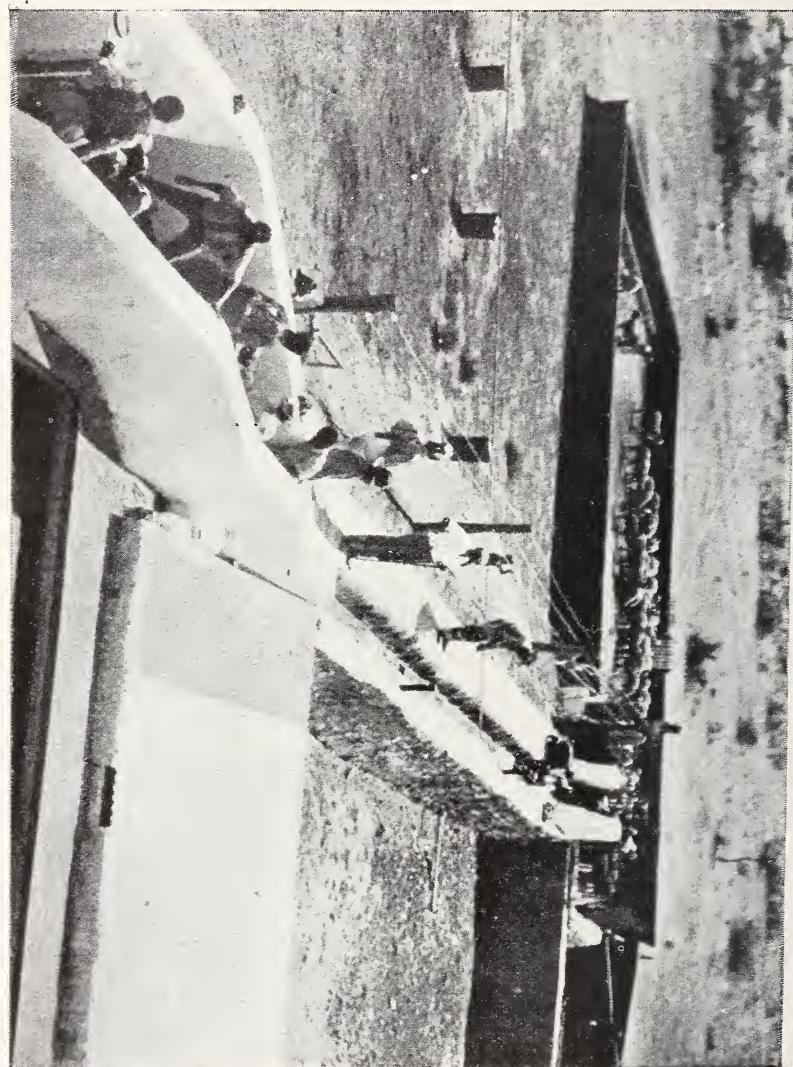


Fig. 226. Sheep washing in German South West Africa.

cluded in the Prize Tending Competitions. In South West Germany the sheep pasture often borders on the vineyards, hop gardens, and tobacco plantations which must also be completely protected. Naturally every piece of ground that is cultivated must be protected; that is what the dog is there for. But if some shepherds turn a blind

eye when they see their flocks nibbling on the border of some neighbouring green crops or in some alluring clover patch, such pilfering is always wrong. The sheep is the only animal that makes use of food, — creating value by this process, — which neither man nor any other domestic animal can use. Thus we have a special race of moorland sheep in the heath country of Northern Germany, the mutton of which has a special gamey flavour, and is prized on that account. These sheep only feed on the otherwise worthless heather, and cannot exist at all without this scanty food. In mountainous countries again, sheep will climb, generally under the leadership of goats, up the slopes to the high "sheep Alps", which are inaccessible to cattle. The utilisation of every and all possibilities of pasturing has also led



Fig. 227. Sheep in a fold.

to the so called "wandering flocks" and the "winter pastures". Flocks which have eaten up the food on the High Alps, or in the forest countries during the summer, are led, towards winter, to the warmer pastures on the Downs, — to save the hay, — in order to feed there on the scanty meadows and stubble fields. Thus the flocks from the Swabian Alps go down to the Rhine Valley, even into Baden as far as the Palatinate and Alsace. Even from Westphalia winter shepherds drive into that country, but they remain mostly within the valleys of the Middle and the Lower Rhine, the Mosel, or the Main. Such journeying shepherds are away with their flocks on the road not infrequently for six long months, and will return to their home country only about the middle of April.

Winter pasturing without any journeying is also usual in many countries. In Schleswig the flocks are driven over the commons during the whole winter and the flocks of moorland sheep remain in the open, that is, on the heath, the whole year round. Even during the hard winter in Upper and Lower Bavaria, many flocks are driven



Fig. 228. Old sheep stalls near Sprotze in the Luneberger Heide.

on the pasture where they find nothing but long stalks or dried leaves from the hedges and bushes above the deep snow.

The flock service of the dog has to accommodate itself to all these conditions. The service varies; sometimes easy and sometimes hard; and his task is always arduous till harvest is over, especially in districts where valuable crops are being cultivated, or where costly sheep are being kept. Such is generally the case in the good agricultural

districts of Northern Germany and that is why we find sheep tending of the highest order there. As a rule, the sheep there are always accompanied by two dogs at least, while to the South of the Main one is generally sufficient. In this part, flocks of 200 sheep are already considered large, while in the North the average flock numbers 300 head and sometimes from 5—600 head. The course of the river Main

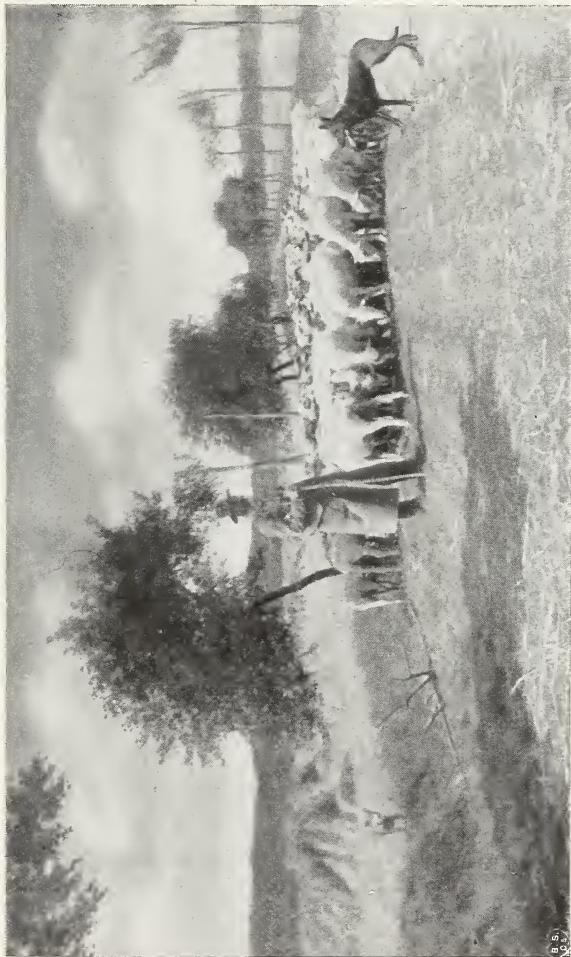


Fig. 229. Road tending in the Altmark (Brandenburg).

forms, in the West, a kind of boundary, and the tending differs somewhat on each side of this boundary and that too not only in the demands made on the dog. Naturally each country, in both districts, has its own peculiar customs to which the people cling; which is only to be expected in a calling which was so indigenous and such a special feature in each district.

Thus in Southern Germany the shepherd always goes ahead of his flock when on the road; while in the North, the shepherd always walks at the side, two-thirds of the way down the flock, so that he can oversee such a large number. This is very necessary, because the pilfering sheep are easily tempted to loiter, and the shepherd dog ("halben-hund") cannot be everywhere at the same time. It is also necessary, because it would be only too easy, when driving through the narrow turnings in a village, for a sheep to be enticed into a house or a quiet farm-yard.

I mentioned before that, in most districts of Northern Germany, two dogs are employed for tending. The older and fully trained dog, who has at least two tending seasons to his credit, must guard and ward off, on his own responsibility, on the side opposite to the shepherd; he "works", or "goes on the half", (whence his name "halben-

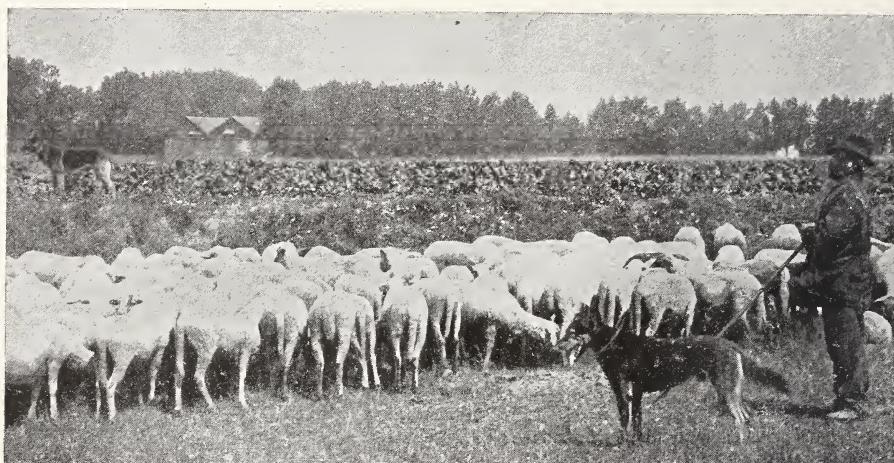


Fig. 230. By the sugar beet, in Saxony.

hund"), — he is also some times called "halting" or, "tending dog" —, to which the Wurtemberg dog very nearly corresponds in efficiency. In general the shepherd pays hardly any attention to this "halben hund" on the road or in the pasture; but the other dog, who is usually much younger, works by the side of the shepherd, under his eye and is therefore called "side dog", "man dog", or "assistant dog", (sometimes "apprentice") and is directed by suitable calls, nods with the head, by the hand or by the whistle. This younger dog is often led on a chain, — which is usually quite heavy to make him more obedient, — and is only loosed to work. The shepherds of Southern Germany have, besides, the "Wiesenhund", (pasture dog, for easy work in the wide pastures) the "hammel hund" (mutton dog) which performs a sort of intermediate service.

The training of a raw young pup can begin when he is from four to six months old. He is then first taken into the sheep stable and allowed to go near a weak sheep. As soon as the dog discovers that the sheep will shrink from him from sheer force of habit, he will press on, and thus learns how to bring a strong sheep back to the

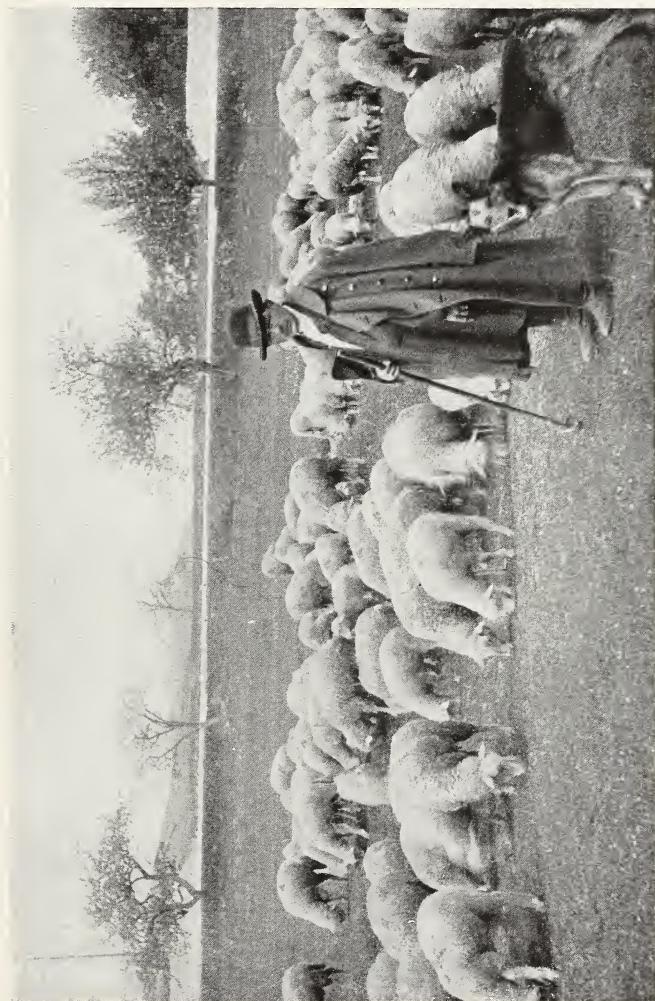


Fig. 231. Sheep pasture in the Swabian hills.

flock. As soon as a dog has acquired a mastery over the sheep, he is taught the right way to grip it. For that purpose, he is held on a short line and a sheep is pushed before his nose, so that he can snap at it, but he is immediately pulled away before he can bite, if he does not grip in the right place. After these preliminary exercises, the

pup can now be taken to work. Here he must first learn to walk in the "furrow", that is to say, to run up and down in the last furrow in front of the crop he has to protect. He is not allowed

to do any damage himself by stepping on the crop, and he must get to know that that particular furrow is the utmost limit beyond which he must not allow the sheep to come. At these exercises in front of the crop, the shepherd presses the pup, which he leads on a line, into the furrow by means of his large shepherd's crook, as soon as his charge tries to leave it. These exercises, which include also the perfecting of the grip, are later on continued with the dog, when he is off the leash, and when special attention must be paid to the avoidance of bad habits, as for instance roaming about, following the tracks of game, excited, hasty work etc. The dog must, on the contrary, be always attentive and willing to work, and must never be allowed to show any slackness. Calmness, perseverance, attention and an ever-ready decisiveness, without any

hesitation, will help the trainer to attain his object in the quickest way. The shepherd should never beat his apprentice dog, nor throw the heavy chain, nor his staffy at him; but it is an excellent punish-

Fig. 232. Tending in the open, in Wurtemberg.



ment, in addition to scolding, to flick a quantity of earth at him with the end of his staff — but not to miss. As soon as the dog has acquired a sure grip and keeps to the furrow, he is called a “furrow dog” or “assistant dog”. He must then be taught to stop the progress of the flock on the word of command, to go ahead or to stand

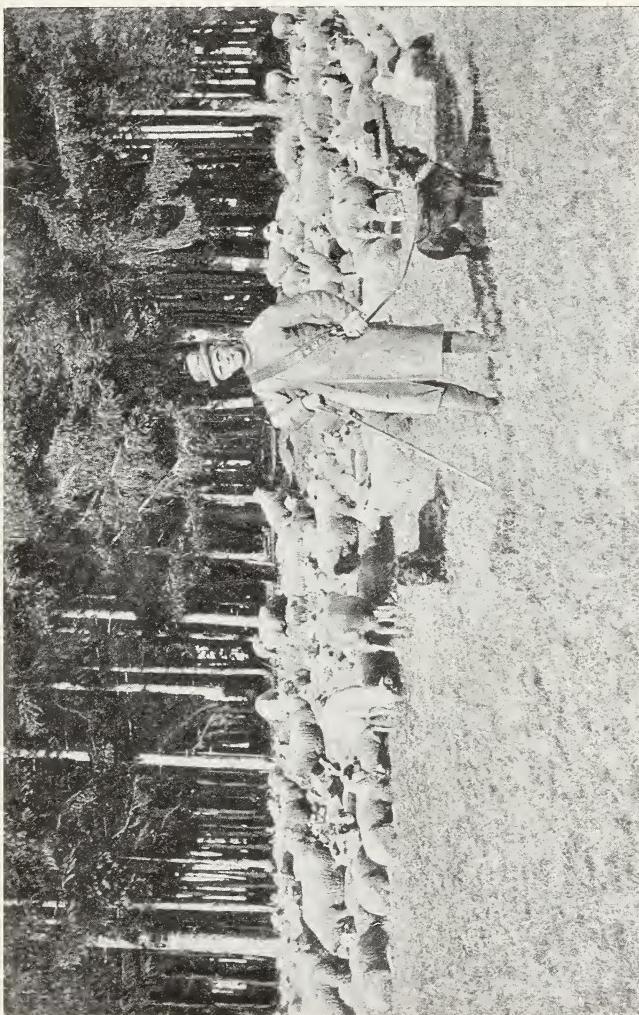


Fig. 233. A shepherd of the Hartz Mountains.

still at a definite place, to sit down, to jump, and to “speak up”. For that purpose the shepherd again holds him on the leash and, while keeping him back from the flock, he hisses him on.

This generally completes of the first year's education. The South German shepherd calls such a dog “crammed”, but employs

him already for tending with him alone; while the North German shepherd requires another full season to make a finished "halben hund" of him. The next year, the dog begins at first again as assistant



Fig. 234. What is the "halben hund" doing?

or "man dog", and must now learn how to behave when traffic meets the flock. Here is where the thorough training of the "halben hund", while driving on the road and on the pasture, begins, and here the apprentice must first be accustomed to keep on the side opposite

the shepherd. Here it must be strongly emphasised that the dog must always change sides in front of the flock and never at the rear, or by going through the flock on the road. On the pasture, the dog must also learn how to guard the side opposite the shepherd. He must take up a certain position, on the word of command, or go in the furrow to the right or to the left of the shepherd, and at last, he must learn how to encircle the entire flock in order to keep the sheep together. Along with this, there are other exercises which he must learn, e.g. how to drive the sheep in and out of the fold or the stable, and finally, how to behave in the stable when the sheep are feeding



Fig. 235. "Halben hund" at work.

there. This completes his education as a "halben hund" about the end of the second tending season.

The "halben hund" keeps to the free side on the road and on the pasture, and he is left to act on his own initiative as the representative of the shepherd. He must drive on, and ward off according to his own judgment and must therefore, naturally, know the limits of the pasture land most thoroughly. In order to discover whether the "halben hund" can stand fast and is useful, he is placed in the furrow, the shepherd then urges the whole flock towards the dog on the other side; if the dog does not drive the sheep off, or even gives way before them, he is not yet considered reliable. An old

"halben hund" will also learn how to distinguish the different crops and will, on the word of command, place himself before the required crop. It has been even reported that, on a new pasture, an old dog found a rape crop, which he had not known up till then, when the equally unknown word "rape" was called out to him. These are of course "refinements", of which only an old working dog, who is thoroughly intimate with his shepherd, is capable. Both these work together in such a natural way and with such certainty that a casual observer might even here speak of the "instinctive and mechanical action of the animal"; but on fuller investigation, he would soon know better.

If the shepherd wishes to stop the flock on the road, or if he wishes to turn it into a side road, he sends the "halben hund" to the

front, by a whistle. He does the same when they meet a carriage on a narrow path; the dog must then elongate the flock by pressing it to one side and allowing only a few to pass at a time, thus making a way for the carriage. In such cases, the dog must always keep between the sheep and the carriage, to prevent the sheep from running under the wheels. The dog therefore must show no fear with regard to any vehicle, (not even a rattling motor lorry), nor even of the driver when he cracks his whip.

As soon as it is desired that the dog on the other side should

change sides, the North German shepherd gives a short whistle, pointing with his hand or nodding with his head to the required place. In the meantime the dog who works at his side must be kept on the leash. The South German shepherd in that case orders his dog to "come over". When changing sides, the dog must never push in between the shepherd and the flock, but must pass behind him. Without a special command, sides must never be changed at the rear of the flock, and the dog must on no account push too far into the flock to the rear.

If on the one hand, the dog is supposed not to keep too far away from the sheep, and to take his place so that he is able to oversee the whole flock on the road as well as in the pasture; he must, on the other hand, never keep too close to the sheep, if a few pilferers try to remain behind. A short whistle or a word of command shows



Fig. 236. Town shepherd from Saxony.

him immediately what to do. In certain circumstances, the North German shepherd calls out "take that one", and the South German shepherd says "go into it", when the dog will immediately seize the offending sheep. If, during the tending on the pasture, the dog must change sides, he is told to "go to the other side" or "go over to head" which is followed by "stand still", "lie down". In Southern Germany they occasionally say "squat"; the latter looks and sounds very funny, when, during a Prize Competition for Tending, an over-zealous South German shepherd will cry out to his dog "wilt thou squat", and at the same time shows him how to do it.

As soon as the flock is quietly feeding and the sheep are settled, the dog must never disturb them; he must then remain quietly in



Fig. 237. Tending in the open; protecting the crops.

his place and only, when he sees the sheep advancing towards the crop, must he be prepared to ward off; otherwise he must neither keep circling round, nor disturb, nor urge the feeding sheep who wander slowly forward, by barking. If, however, the sheep move on too hastily, which they usually do in wet or windy weather, the North German shepherd sends his dog to the front, by a short trilling whistle, to stop them. The dog will then force the flock by warding off, and, on the word of command, by gripping or barking, to proceed more slowly. In Southern Germany the dog is told, to go "to the front" for that purpose. If for any reason whatever, the pasturing flock must be quickly gathered together, the shepherd calls to the sheep and gives a short sharp whistle; thus the dog, racing round the flock, gathers them up.

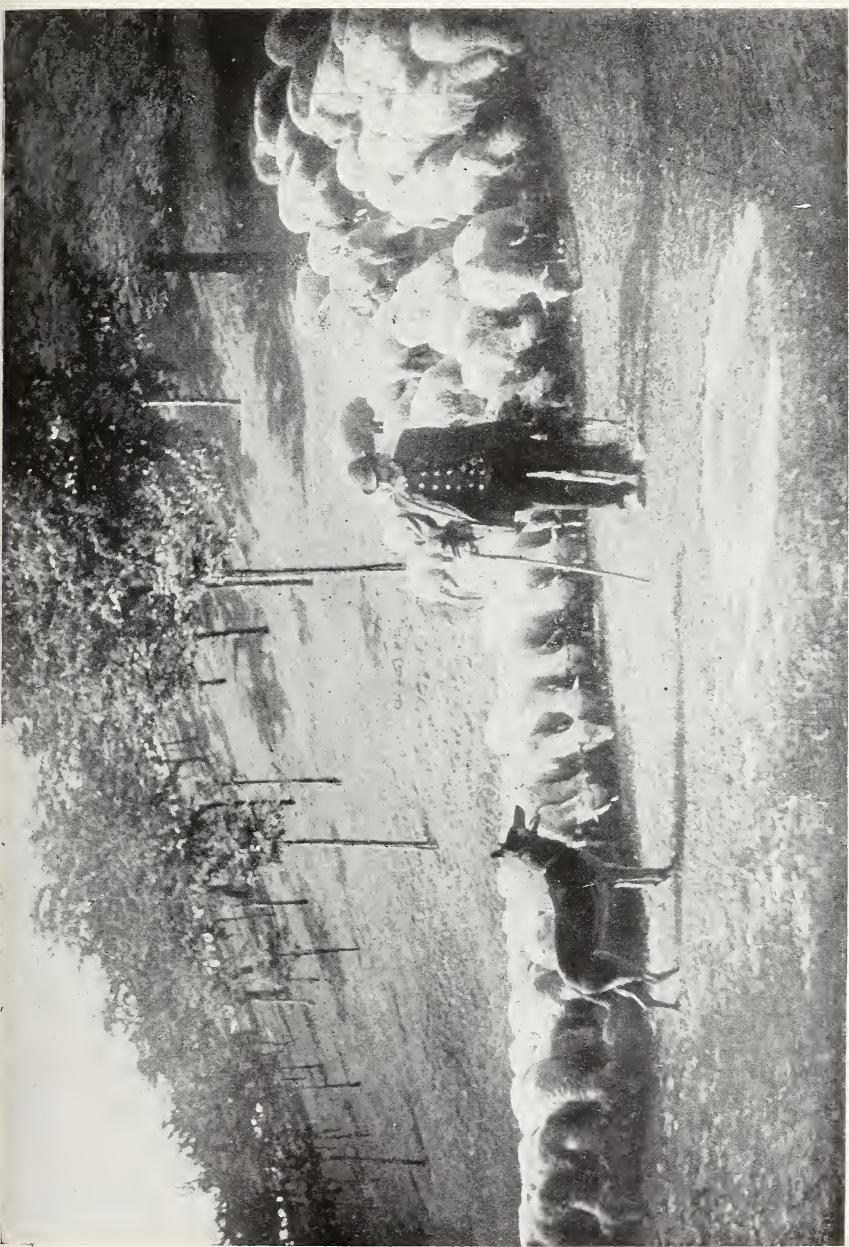
When warding off in front of the crop, the dog must never make unnecessary exertions, he walks up and down the furrow before the pasturing flock when the occasion demands it, — this marching is called "sentry-go", — and stands from time to time to convince himself that all is in order behind his back. He will drive off single pilferers by a short run, and the obstinate ones are punished by a sharp firm grip. If the sheep should advance towards the crop in a body, he must throw himself on them without hesitation.

If a dog does not know how to assert his authority over the sheep, the greedy flock will immediately press forward more and more eagerly, and finally force a weaker dog to stand back, or will even trample him under their feet if he dares to stand fast. Weak dogs are therefore useless for hard work on narrow pastures, and for attentive tending; they can, accordingly, only find employment with the flocks of lambs on very large sheep breeding farms. These lambs have their special pastures to make them to grow quickly. Here the "lamb dog" is one who must never grip, but only push them with his nose, and he can lie in the shade the whole day long by the side of the equally lazy "lamb-boy".

The dog is only allowed to give voice in certain definite cases, and on the word of command, as for instance, when the sheep must leave the fold and are obstreporous, or when the flock has to be elongated to make room on the road and in the narrow lanes, or when passing over a bridge. He is only allowed to do the same with lambs, instead of gripping. In Northern Germany the shepherd commands "bark once" or he lifts his arm and shouts "hurra". In Southern Germany he always says "what does he say?" In the Franconian districts, prolonged barking is generally expected from dogs on the road or when warding off. In other countries, such noisy fellows are called "stump orators", because they blame a great deal and punish no one. The shepherds do not like them because they attract unnecessarily the attention of the guardians of the fields and of the police to the flocks. "Stock still", on the other hand, is the name of a dog in Wurtemberg who never gives tongue even in "stiff" or "hard" work on the narrow pastures.

As we have already seen, the shepherd has no use for mollycoddles, the dog must not only courageously attack a single sheep, which is always larger and heavier than himself, but he must hold his own even against the whole flock, which exercises an enormous force when pressing forward, and will trample under foot any creature that falls down. The dog can only keep his end up against obstinate resistance and persistent thieving by flinging himself precipitately against them regardless of consequences, and by sharp grips. The grip must be short and firm, pressing against the sheep, but the dog must never shake nor pull for any length of time. A dog who does not immediately relinquish his grip must be taught to do so after a short sharp whistle. Indiscriminate biting and seizing can do much harm, therefore great stress must be laid on teaching the correct way of gripping. Under certain circumstances even the bite of a dog

Fig. 238. The homeward way.



who grips correctly can be dangerous, as for instance when they have eaten carrion, or otherwise infect the wound they make. The bite of such dogs is especially dangerous, when they have eaten the flesh of dead sheep that had gangrenous diseases on the skin or in the womb. The bacillus of the malignant "oedema" can then be easily transferred. Such carcases therefore should be immediately destroyed, and under no circumstances should they be left as food for the dogs.

The manner of the grip varies in different countries; I have already explained in Chapter I what these grips are. Our shepherds are very conservative in retaining the particular kind of grip, practised in their locality. The shepherds in Northern Germany will tolerate no other kind of grip than that of the haunches. The South German shepherd, again, will never understand how the grip of the nape of the neck or of the ribs can cause any damage. By seizing the sheep on the nape of the neck, a dog, who is too sharp, can so injure the sheep that it will have cerebro-spinal fever; but in the case of lambs, who remain together in large herds, he can dislocate the vertebra by merely shaking them. The grip of the ribs, on the other hand, — which can never be used with safety for ewes in lamb, — can result in the formation of cavities, which is especially dangerous, because the haemorrhage, which results between the flesh and the skin, is not discernible till mortification begins to set in. The grip of the haunches is effected not only with the front part of the jaw, but the dog should take the haunch full in his mouth, and should produce especially a pinching effect with the back teeth. Thus the grip of the haunches is the only grip by which he can hold the sheep fast and administer a punishment which will be felt afterwards, without doing any serious harm. Because the dog grips the haunch from the outside, and the upper jaw always comes into contact with the inner part of the haunch; he pushes the udder instinctively to one side with the point of his nose, so that all damage to it is avoided. A dog who first tries to make this grip another way round, that is, so that the lower jaw comes on the inner part of the haunch, will soon change his methods automatically. The grip of the haunch, as taught in North Germany, is undoubtedly the best. Here the dog must make his teeth meet over the hocks just where the thick part of the haunch begins, thus the haunch itself, with its specially tender flesh, cannot be injured; at the same time, he does not grip too low down on the ankle bone which could cause lameness.

Generally it can be conceded that it does not matter very much which of the three kinds of grip the dog uses, so long as he does it in the right way. It stands to reason that good shepherds will never allow wrong grips such as those of the ears, the throat, the breast the shoulder the belly, the legs, nor finally that of the tail.

The dog must work hardest of all in the spring and the summer when all the fields are under cultivation. Sheepshearing is always from the end of May till the middle of June. After this time dogs

who grip too tightly can cause very serious injury to the sheep thus deprived of the protection of their wool. On this account in Southern



Fig. 239. On the border of the clover patch.

Germany, where the grip of the nape of the neck and of the ribs is usual, the points of the fangs of the dogs are filed down. The

v. Stephanitz, The German Shepherd dog.
20

shepherds often leave only short stumps in cases where dogs are especially sharp. Indeed, I myself have actually seen dogs which, while tending, had an iron bit in their teeth to prevent the possibility of too sharp a bite. For work requiring care such savage dogs — the Wurtemberg shepherd calls them "blockheads", "murderers",

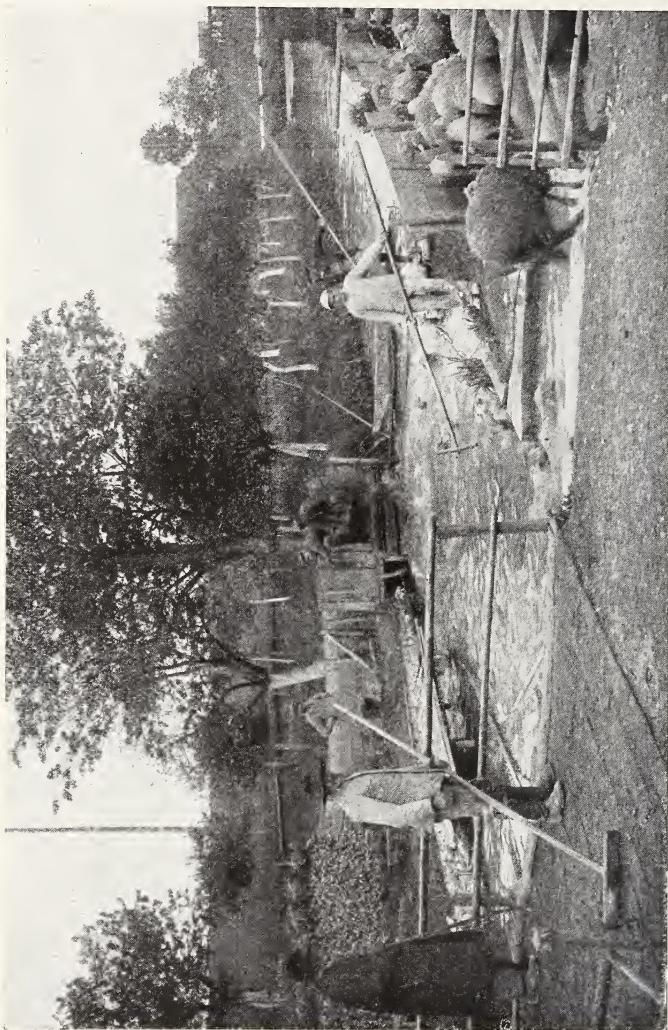


Fig. 240. Sheep-washing in Wurtemberg, 1st. day; Soaking.

"thrashers" — cannot be used. Where such fine work is the order of the day, they must be banished from the sheep.

The working dog has the hardest time in the season of sheep washing, which generally comes before sheepshearing. Up-to-date washing places such as I have shown in my illustrations of

German South West Africa are not, as a rule, at the disposal of our shepherds. They conduct the whole process in the good old style of our grandfathers, as may be seen from the accompanying pictures, taken in the district of Ulm, for which I am indebted to L. Braunwart, a shepherd of Langenau. In the first picture, the sheep, (in the back-

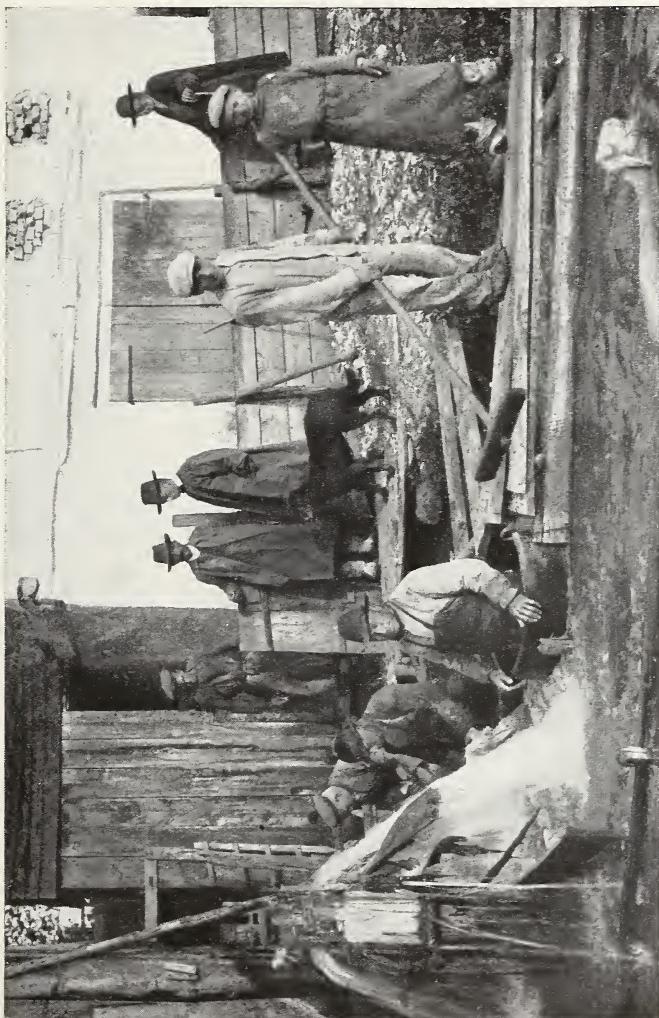


Fig. 241. Sheep-washing in Wurtemberg, 2nd. day; Rinsing.

ground on the left in front of the whitewashed trees), are driven by the dog into the funnel-like tunnel, made out of boards; during which process they always make themselves very obstreporous. When they have come through the tunnel, they are thrown into the water and are pushed under with the crook; on the right of the picture, in

front, the sheep can be seen leaving the water thoroughly soaked, and they are then driven into the stable, while still wet, to pass the night there so that the wash can penetrate right through



Fig. 242. The shepherd's return.

and loosen the dirt. The next day, the sheep (Fig. 241) are taken to another place and are again driven into the tunnel, at the end of which they are once more thrown into the water and are held there, under a powerful stream of water, by men standing in tubs; by this process all the dirt is thoroughly beaten out of the skin; hence the name "beat-washing". The water wheel which elevated the water is in the wooden partition of the mill in the left background. The washed sheep then come through the trough, (in the right foreground), to land once more; and after two days of good dry weather they are ready for shearing.

The dogs must seek out and bring back the sheep that go astray and under certain circumstances, they must gather again the flock when it is entirely dispersed. While doing this, their eyes, as a rule, no longer play an important part, for the dogs usually smell out the tracks till they have found their sheep. These have such a distinct flock scent for the dog's nose, that intelligent dogs can separate the sheep of the different folds and know how to fetch out their own sheep from strange flocks.

Let it be here observed in conclusion that even to-day, dogs that are left alone with their flock will often enough find opportunity to protect it from thieves. A good working dog must therefore be trained to fight men. As a rule, he naturally shows a great distrust of strangers which often enough will be followed by premature aggression. If in the absence of the shepherd and the dog, a theft has been committed, our working dogs know very well how to trace out the thief in a manner worthy of the best trained police dogs.

Herr Löns sometime ago published a wonderful account in the "S. V.-Zeitung" about the high power of scent and reasoning of the shepherd dog working with the flocks. He writes, "One fine morning in July, I was lying near the precipice of a mountain top before dawn in order to find out a buck that had been eluding me; in front of me there was a high plateau broken by crevices and hollows, where a large flock of sheep was in a fold on the barren land. Some fox-whelps were playing not far away in front of their mother's cave, in the lime rock, while the old vixen announced her presence from afar by hoarse barks. The sheep, becoming restless, pressed against the hurdles and threw down one side. The flock then scattered in wild flight, so that soon not a single sheep was to be seen on the whole country side. After some time the shepherd arrived with his two dogs. I was curious to see his face, but after inspecting the damage, he quietly put up the hurdles again, called out one word to the dogs, who immediately went off at a gallop, and quietly sat down on his cart to breakfast. Soon the high barking of the dogs was heard, sheep came rushing back to the fold from all directions; here and there in the far distance one of the barking and pursuing dogs was seen for an instant; and hardly a quarter of an hour had elapsed before all the sheep were gathered together once again in the fold. That was nose work of the most perfect order and I did not know

which to admire the more; the intelligent work of the dogs or the implicit trust of the shepherd in his four-legged companions".

Further good examples were given by sheepmaster M. Wald of Massing in Lower Bavaria: "The sheepmaster August Wald who was on the large Cannena Estate near Halle owned a dog called "Marsch", who in summer time often had to tend the sheep alone. That would not be out of the ordinary, but it was a very good performance to bring the sheep home always at the right time without doing, or allowing any damage to be done. It happened so; the sheepmaster's wife, Frau Wald, used to superintend the feeding of the pigs on the Estate, but in the summer when there was much to be done in the fields, she generally helped in this as well. On such occasions her husband had to take her place, and Marsch conscientiously tended the sheep alone. One day Wald was kept away from his work later than usual, and after 7 o'clock at night, (when



Fig. 243. Sheep-master Wald-Massing with the shaggy haired Rackus v. Massing SZ 742 HGH.

as the flock was well under way, he proudly marched in front, keeping, however, a sharp eye on both sides lest a sheep should pilfer. From that time on Marsch did the same thing very often and Wald considered it quite ordinary, as did his two farm labourers."

Wald reports further as follows "Sheepmaster Franz Meinhardt of the Nienberg Estate near Halle on the Saale had a dog called "Grenz", while I was "lamb-boy" there. In 1870 our sheep farm hand was obliged to go to the war, and Meinhardt was obliged to find a substitute. He procured someone from Giebichenstein near Halle, called Wilhelm D..., who, however, was not too proud to accept a big drink of Nordhäuser. His pasture lay beyond the Railway line between Halle and Magdeburg. One day he had drunk many healths and fell asleep after he had taken his flock on to the sainfoin heath. When the sheep had eaten their full, they obligingly began to walk home, accompanied by Grenz. The

the sheep were generally brought home) Marsch arrived with the whole flock before the gates. We thought at first that the sheep had run away from him, but, after purposely remaining away for some time and observing his dog, Wald soon found out that this was not so. For as 7 o'clock approached, Marsch always became restless, and with ears pointed, erect and listening, he would run or four times a short distance towards the farmyard to see if anyone was yet coming to fetch him. Of course no one went out to meet him, for Wald waited to see what Marsch would do. The dog did not wait long before he began to gather the sheep together quietly and to drive them from the pasture on to the road, and as soon

express from Halle had been signalled and the railway crossing was closed just as the flock approached, and the express came thundering on. Silber the signalman often told us later that he had thought that at least half of the flock would be cut to pieces. Far from it; Grenz allowed the flock to advance just as far as the warning sign,



Fig. 244. Army shepherd in the neighbourhood of Arras, Northern France.

and then he ran ahead, and not a single sheep was allowed to advance a step further. As soon as the barrier was raised, Grenz went back to his proper place and the march home was continued. Silber then went to wake up the sleeping hireling."

Wald then concluded his narrative by the following: "When I was head-shepherd at Schloss Arnstorf, in Lower Bavaria,

I had a dog called "Karo". Everybody knew that this dog always drove the sheep alone to the pasture and there reliably tended them. He was also one of the best dogs for finding lost sheep, of which I will give the following instance'. We shepherds were all Protestants and had a four hours' walk to Church. One of the hands had asked leave to go to Church and had gone away on the preceding Saturday afternoon, and a day-labourer was obliged to tend the sheep. On Sunday morning when I passed through the stables, the fold of the man who had gone to Church appeared to me to be strangely empty. I talked about it to the manager, Vogt of Gesima, who met me by chance, and we both proceeded to count the flock. There were 63 sheep missing and I knew that this could only have happened since the day before. Now we began to search; I took my Karo with me in front of the village and in the direction from which the labourer had driven the sheep home the day before. Then I told him "Fetch Karo", and he was off "like a streak". I then searched the whole pasture and the adjoining forest, by myself, without discovering a trace of the sheep, nor did I see or hear anything of my Karo. I was already at my wits' end when a messenger came running with the news that I was to return home, for the sheep were already found, On his way home the day-labourer had had to drive his flock through a wood, on the edge of which there was a narrow field of red clover, here the defaulting sheep had probably loitered; but after they had eaten their fill, they did not walk home but followed a path which led to the place where a fold had been made the previous Autumn. There they stopped and lay down to rest in an adjoining hop garden. Here Karo found them and brought them home safe and sound "all on his own". "At present I have a dog called "Rackus" whelped in Nov. 1901, whom I took to the flock with me for the first time in the spring of 1902. In the Autumn of that same year I tended my sheep with that dog who was not yet one year old, in a field which was about 390 yards long, but only 27 yards wide; just alongside the railway station. On the right there was a clover crop growing on a similar strip of land, and on the left the land had been ploughed. When the sheep had settled down to graze, I thought to myself that a good quart of beer would do me no positive injury at that moment, and off I went to the neighbouring Brewery. When I came back to my flock after some time, Resch the goods porter and Ficker his assistant said to me "Well shepherd! we have just been watching your dog tending the sheep alone for a good half an hour, because we thought that it was not possible that none of the sheep would get by him into the clover; but even if the strip of pasture had been narrower, we are sure that he would not have allowed one single sheep to pass; so industriously did he stick to his tending."

In former times when Agriculture had by no means reached the high level of the present day, shepherds in Wurtenberg — and I heard the same from Bohemia and saw it a short time ago for myself in Serbia and Silesia — used to hang tuneful bells on the necks of

several sheep of their flocks in order to impart some liveliness and music to the flock. They used to carve the wooden collars of the bells themselves. Later on when agriculture increased, these bells were especially hung on the necks of sheep who were notorious thieves, who liked to loiter behind on the way home at night, and knew how to escape the attention of the shepherd. The training of the herdsman's dogs at that time was not yet so perfect that the shepherd could have sent his dog into the dark to round up the stragglers. In the same way pilferers who used to jump over the hurdles during

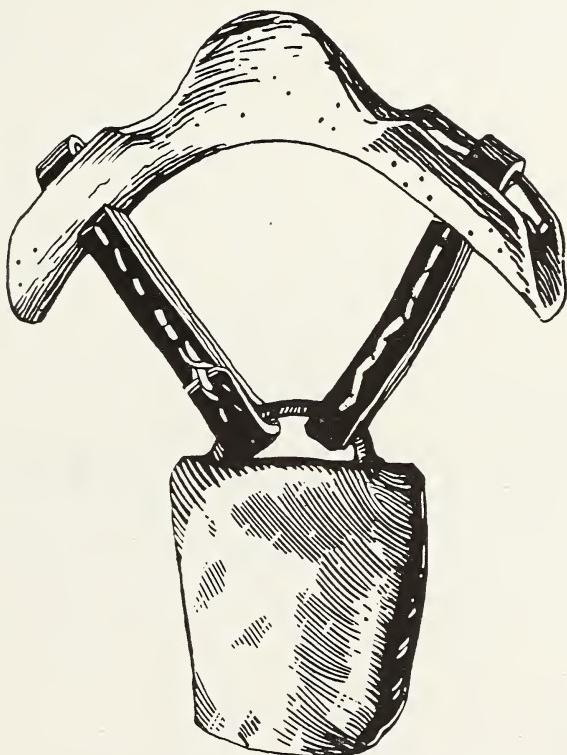


Fig. 245. Old sheep bell from Wurtemberg.

the night wore such bells; and such a rover would often be frightened by the rising partridges which he had disturbed, and would return to the fold at a gallop, when he would disturb the whole flock which was at rest and they would break out and sometimes cause considerable damage. But as soon as the sheep heard the wanderer come back and they recognised the bell, they knew what was the matter and remained undisturbed.

The shepherd too possesses the happy certainty when he hears the different bells, that all his untrustworthy sheep are on the spot.

In conclusion, bells were hung on sick sheep, and especially on those who had staggers.

The vocation of a shepherd demands a thoroughly good man. He must not only be strong physically, able to withstand the weather, and unassuming; he must also have certain good qualities of the soul: modesty, honesty, reliability and fidelity, and his dog has these good qualities from him. To be faithful as a shepherd is a quality which has been long appreciated; and the idea was adopted by the Church, whose high Dignitaries carry the crook, modelled on that of the shepherd. Notwithstanding all this, the calling of a shepherd was once considered as one having no reputation, and this not only because the trade of a knacker was often connected with it, but especially on account of the suspicion of magic and of secret knowledge



Fig. 246. Thuringian shepherd in old time costume.

which they were supposed to possess. It is a well known fact that even to-day some shepherds are supposed to have some special efficiency in these latter secret arts, and the miracle working shepherd of Ast who lived on the heath was not the only quack to whom followers came in droves from far and near. Moreover it is not at all astonishing that the vocation of a shepherd should be the very one to afford the rather more intelligent a wide knowledge based on actual experience. Do they not always live in permanent and intimate touch and contact with Nature, and have they not at their disposal plenty of time and the opportunity to observe the phenomena of life? A shepherd must also have quite a good knowledge of how to look after and keep his charges, if he wishes to carry out his duties with anything like satisfaction, or,

if, as an independent man, he wishes to derive sufficient income for his livelihood.



Fig. 247. The old shepherd.

It was as late as 1704 that the shepherd's profession was recognised once more as "honourable" by an Imperial Edict, and a few years later, the Emperor granted them a Coat of Arms and all the rights of a Trade, with their seal, their Corporation Chest and their Colours. But even before this date, however, shepherds had always hung together and a corporate pride established their vocation as hereditary. They knew very well how to keep themselves to themselves in relation to other farm hands, and to make their profession respected, and the word of a free and independent shepherd always carried much weight in a country community. In former times, landed proprietors and the shepherd's family remained indigenous; they shared each other's griefs and joys, and the estate as well as the sheepfarm passed from father to son. Such free and independent shepherds often employed their married brothers as assistants, and their daughters who had good dowries married the farmers.

Modern times with free coming and going, the large towns with their attractions, and above all, the decrease in sheep breeding have unfortunately wrought great changes in this respect. The making and the training of a new race of shepherds has therefore been accompanied with ever-increasing difficulties. The German Agricultural Society has recently paid special attention to the training of shepherd-apprentices. It is true that those easy times when the shepherds used to go a sheep-tending with



Fig. 248. German shepherd in Slavonia.

their knitting in their hands are a thing of the past; but notwithstanding, the vocation offers inducement enough even to-day for a young man, sound in body and soul, and opens out to him the possibility of a sure if modest livelihood in the future. Everywhere, shepherd's Associations have been formed for the purpose of protecting their interests, and they have amalgamated themselves to form the Confederation of the Societies of German shepherds (*Reichsbund deutscher Schäfervereine*).

I need not lay special emphasis on the importance of a good shepherd so far as our breed is concerned. Shepherds too can, and should take advantage of the particular aims and the objects of the SV; just as we must always have fresh working blood for our breeds, by breeding with dogs of good and not over-bred strains in order to improve the build of our working dogs. Furthermore, a better support of the Tending Competitions which the SV has held since

1901 is a thing much to be desired. This working hand in hand with us will not be at the expense of their own particular interests, if they breed and train young dogs for dog keepers in the towns, and above all, if they breed for the rising generation of service dogs, for which there is an ever-increasing demand from the State and the District Authorities. Shepherds with their fine working dogs, which are the result of hardy and sound breeding, are just the very people to take up this work, the benefit of which they will feel as well.

A shepherd is placed in charge of a flock on an average, of 3—400 head of sheep in all circumstances. When, as on large



Fig. 249. Pastoral life in Hungary.

estates, the flocks are larger, several shepherds must be employed, who are under a sheep- or shepherd-master. It is more correct to speak of them as "shepherd masters"; "sheep-master", however, is a native expression and was already known in the old times. The sheep master is the right hand man of the Manager of the sheep-farm when the occasion warrants it; and, in places where there is no Manager, he is responsible for the entire sheep department. He is over the other shepherds, the sheep hands or assistants, and further, he is over the shepherd apprentices and the lamb boys which are kept on the special sheep breeding establishments. In the majority

of cases, he is an old long service shepherd, who can no longer execute any other duties as a shepherd. Even the single employees on a small



Fig. 250. Hungarian Nomad shepherds pegging out a claim in the district of Kun-Szent, in the Pester region.

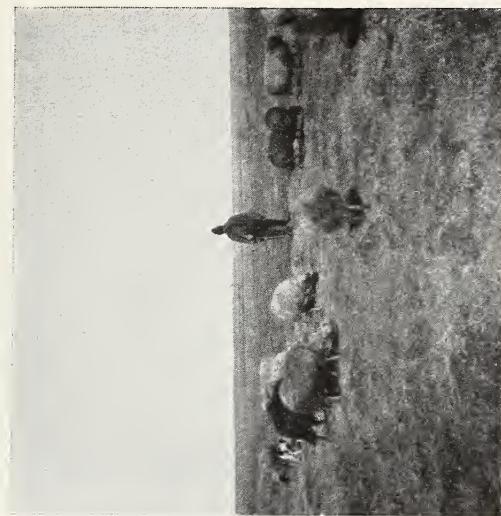
sheep farm, or those of a peasant sheep farmer are called shepherds; and the term can be used as well for one who is his own master, or who is employed by a District Authority, or by a Society.



Fig. 251. Shepherd belonging to a shepherd's Guild in Roumania from Fogarad, Transylvania.

When after the 17th and the 18th centuries sheep-breeding, through the importation of a race of sheep with finer wool, entered upon a period of greater prosperity among us, and in the adjacent countries of the East and the South, German shepherds with breeding animals often came to Poland, Austria and Hungary. The rise of Hungary at the end of the 18th century enticed many South German shepherds thither. Many of them settled down there, and, in spite of the hostility of the country, the recognition of German industry and German capacity could not be gainsaid by the Hungarians. According

to E. von Rodiczky, (to whom I am also indebted for the pictures of pastoral life in Hungary), German shepherd families remained not only on the large estates, but they also set up independent sheep farms and breeding establishments. The daughters of such wealthy



Shepherd

Fig. 252. Sheep flocks in old Serbia in the neighbourhood of Semendria.
(from a photograph by the author.)



Shepherd boy

sheepmasters of the Hungarian Steppes were later on most assiduously courted by the poverty stricken nobility, and to-day many of their descendants with Hungarianised names are large landed proprietors there.

The native shepherd, however, was of much less repute in Hungary. The cattle and horse tenders, even the swine herds, who proudly rode their horses, contemptuously looked down on him as they passed by the shepherd, who at the utmost could afford as a snorting charger

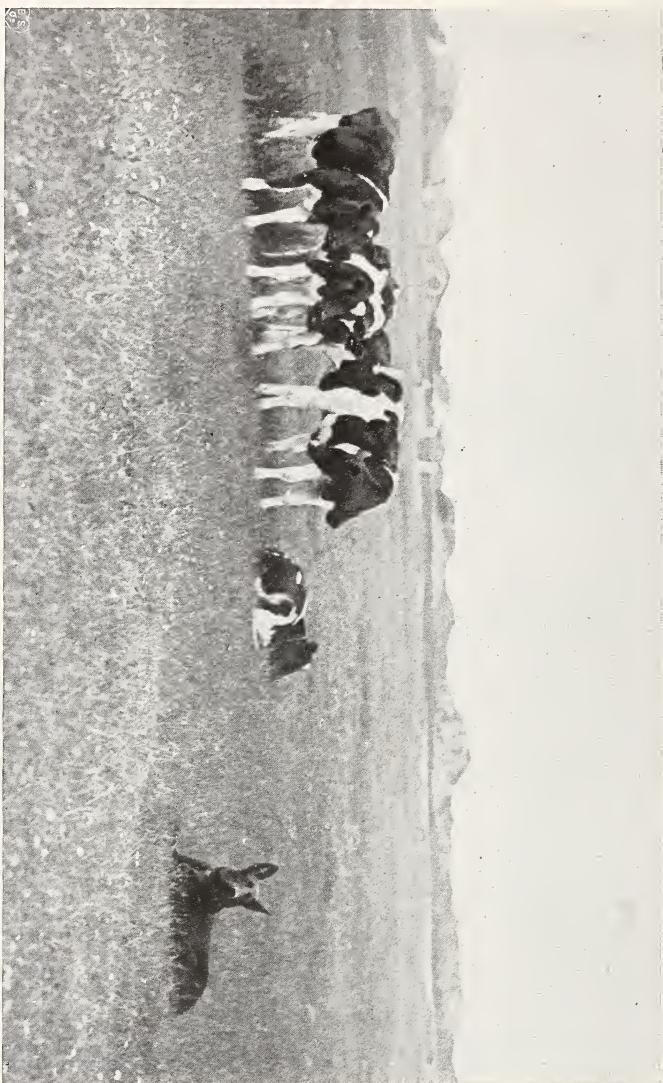


Fig. 253. On the moor.

— a donkey. The wandering shepherds were called “aliens” (Wallachians), and the native landowners did not go out of their way to extend them any tokens of goodwill, for, in virtue of their ancient Charter, these wanderers had the right to pasture on any ground that

pleased them. The Hungarian shepherds had, as everywhere else, united in their conservative way to form Guilds and clung tenaciously to their old customs and to their festivals which were celebrated on certain special occasions. I have already mentioned in the First Chapter that, in the Danube districts, sheep are often tended without a dog, because flock tending is no longer necessary, and the services of the tending dog proper are not yet required. Swift-footed shepherd boys there, as in Spain and other countries, take over the rôle of the dog, with their whip, which they constantly crack. I have already spoken of our own Shepherd Associations; they are taking



Fig. 254. Cowherd with shepherd dog from South Germany.

the place of the old Guilds, and still celebrate in rural districts their customs and festivals with their usual reverence for tradition. Thus on the Swabian Alps, which from olden time has always been known as a special pastoral country, may be found Markgröning, the place where the principal Guild Chest has been deposited. Other Guild Chests were deposited at Urach, Heidenheim on the Brenz, and Wildburg near Nagold. In all these places the shepherds gathered, generally in the odd-numbered years, to celebrate on special days, in July or August, their "shepherd's days", and they came from far and near to speak of all their Guild affairs. Of course, the peculiarity of their festivities was an attraction for large numbers of spectators. The shepherd "Market" is opened there by the blowing of the "Reveille"; a procession then takes place to the tune of the old march of the

shepherds, but the principal attraction is the shepherd's cart dating back to 1724. After Church, all kinds of Competitions and Dances for Prizes are held at the place of the festival. First come the shep-



Fig. 255. Geese-tending.

herd's races, then Competition races for shepherds and bare-legged shepherdesses; there is also a race for girls carrying water in their shining and flower-decked copper pails. Then there is a "cock

dance", and a "cup dance". During the first, the standard bearer waves his flag and wins a prize if, during his performance, a cock descends to crow; while in the second, the dancer or his partner who succeeds in throwing down a filled cup, which has been placed somewhere high up, wins a prize. For the young people there is a "sack race" and other joys; while naturally there is every opportunity for the purchase of all things necessary and unnecessary.

It is hardly needful to mention that all German shepherds are music lovers, and have many beautiful songs, among which may be found popular legends that have come from the lips of their own comrades. It is to the credit of the "Deutscher Schäferzeitung" (German shepherd's Journal), published at Berlin and Wanzleben, that it was the first to publish a collection of these songs in a delightful little volume. Besides this paper, the "Süddeutsche Schäferzeitung", which is published at Stuttgart, works for the interests of the shepherd, while various other agricultural reviews, and especially the "Zeitschrift für Schafzucht" (Sheepbreeding Review), published at Hanover, promotes the welfare of sheepbreeding.

It goes without saying that the shepherd and his dog occupy an important place in German proverbs. I have only space enough to quote a very few from Kelling's collection, such as: "like shepherd, like dog", "Mean shepherds love biting dogs", "fierce dogs — tame sheep", "Lazy shepherds have good dogs", "when the shepherd wills, the dog must bite", and further, "if the shepherds quarrel about the dogs, the dogs are better off than the sheep", "one cannot be shepherd and dog at the same time", "when the dog's awake, the shepherd sleeps"; and finally, "while the dog is barking, the wolf devours the sheep"; but, "even if two dogs bite each other, as soon as the wolf comes, they will tear him in pieces together"; and "a good dog scares away the wolf". From the Low German comes the delightful counsel of the worldly-wise shepherd to his dog "Only get married and you'll soon drop *your* tail, my boy".

This brings us back to the dog once more. I have already constantly said that his real service is with the sheep; he works, however, with all kinds of cattle, and knows very well how to adopt himself to every other kind of work. Dogs that are particularly sharp are used for pig-tending, because the country pig when on the pasture is an awkward customer who does not possess the patience of the sheep. A sow or a boar can deal hard blows and even draw blood, and an old boar will sometimes turn on the swineherd and strangers. In such cases, the dog must come to the rescue and bark the villain into a state of sweet reasonableness. With swine, the grip should be on the hams; in South Germany, however, the grip on the ear is allowed, but the sensitive tail should be never gripped. In all other respects the work of the swine or sow dog is identical, whether on the road, or on the pasture with the herds, with that of the shepherd dog. Very small dogs are sometimes used with the larger cattle which are frequently seen on the heath. It is never a question of size with the dog, but of courage and cleverness, for the dog is supposed to grip one hand's

breadth above the hind fetlocks, and must then immediately jump to one side, or throw himself down, if he does not wish to get a very hard kick on the head, which in many cases might lay him out for good and all. Any other grip is forbidden, and on no account must he jump against the belly or the udder, but when attacking cattle he must always bark. Occasionally one also sees shepherd dogs with horses feeding in the fields — our dogs are very fond of and reliable in guarding horses, at work and never allow them to leave their place — and in the East they are also used for tending large flocks of geese. The dog for such work must be carefully selected, for a goose is very short-tempered and has a very good idea of how to use its beak, but it cannot stand any grip. In former times when the geese in large flocks waddled from Posen to Berlin and the various other markets, shepherd dogs generally trotted along with them to drive them. It is true, however, that before the commencement of the march it was not necessary to harden their pads with liquid pitch as was done with their charges.

All the working shepherd dogs that do not find work with the cattle nor with the flocks, and those that show themselves unsuitable for such work, always find another sphere of employment, generally as watch dogs on the farm. What our peasant requires is a sharp reliable watch dog who is never in the way, but always at hand, who will cause him no anxieties in keeping and who will not be too dainty in his food. He can find no better and no more faithful servant than our shepherd dog. The more bulky and more powerful dogs are in great request by the butchers and cattle-dealers, who use them when driving their victims — here also barking therefore is required — and who wish to have a reliable companion at their side when they must walk over the country with a pocket book full of notes. In the district of Holstein, and probably also in other districts, shepherd dogs were formerly required for turning the churnwheel; now I hope they are finally relieved from that service by small machinery. I have already mentioned how our working dogs are used for hunting, and how they are employed as pilots by the fishermen on the Continental shores of the North Sea.

The amateur dog-keeper also first chose the shepherd dog as a "Hovawart", that is watch and companion dog, until he recognised his full value and learned to estimate his shepherd qualities and nature accordingly. Then only did the SV commence operations, and an attempt was made to find a place for the shepherd dog within the two available branches of Military Service already existing, that is with the War dogs, and with the Ambulance dogs. I shall have more to say about this later on. On account of the small number of Service dogs required in these two branches, the SV advised amateur keepers of shepherd dogs to have their dogs trained for such a possible use and to secure for them a regular education and training as protection dogs.

From this, our present day Police dog Institution has evolved, and as this Institution became the head of the service dog movement, we shall here give it the first place of importance. The splendid

experience when training our dogs, and the reports of the Press of Foreign Countries about the trials made with Belgian shepherd dogs in the Security Service of the Police, arranged by the SV, already as early as 1901, suggested similar trials to the German Police Administration. The SV placed itself at their disposal with its experience, its means and its dogs, and published, as early as the beginning of the following year, its Regulations as to the use and the training of Police dogs. It drew up a scheme for Tests and in 1903 began its regular Efficiency Trials*). On the whole the suggestion of the SV was favourably received — of course sneers and hostility were also encountered — and when, in addition to the Police Administration of other large towns, the Administration of Berlin and then the Ministry of the Interior were persuaded, the battle was won all along the line. The late Police-Major Klein, (who unfortunately died all too early in life), was commissioned by the Ministry to establish a Government Breeding and Training Institute for Police Service dogs at Grünheide, near Berlin; and similar Municipal Institutions, as for instance at Grandberg, and Iserlohn were also founded. Large Administrations established their own courses for dog leaders, among which may be mentioned the Berlin Criminal Police under the management of Chief Inspector Leonhardt; and the Mounted Police Schools also, especially that of Wohlan in Silesia, took up this training. This was a very useful and necessary thing, as were also the uniform Regulations as to training and use. These were especially needful, for, as in the case of every new Movement, the successes of some well-tried and experienced dog leaders had given the idea to people, who in this respect were absolutely without experience, that it needed nothing but to procure a dog from the Police, and everything else would follow as a matter of course. Failures, in consequence of insufficient training or bad leadership, employment of the dogs at the wrong place, as well as hopes that were too high, again through lack of experience, might have caused a considerable set-back to the whole Movement. Even though, when the Government took up the question of the Police dog, Police Lieut Most, (the wellknown author of some papers on Training, who succeeded Major Klein), showed some biassed unwillingness with regard to the use of the dog in detective service, this did no real harm; on the contrary, it gave an impetus to the work of all convinced believers in the possibilities of the service of the dog in this very respect. To-day the Administration of Grünheide has abandoned this attitude of aloofness, and under the present Manager, Police Lieut. Schoenherr, the work of instruction in tracking is being zealously pursued once more.

But I have digressed in giving an account of the development of the Official Movement in favour of the Police dog, without first

*) "Der deutsche Schäferhund als Diensthund" (The German shepherd dog as Service dog) by Capt. von Stephanitz.

1 2 3 4 5 6 7



Fig. 256. Government Breeding and Training School at Grünheide in Brandenberg.
1. Inspector Thiehorn of Grünheide; 2. Lieut. Schoenherr of Grünheide; 3. Herr v. Keudell, Privy Councillor of State of the Police Department at Berlin. 4. and 5. Prince and Princess Friedrich Sigismund of Prussia; 6. K. Fröbus, Director of the Service dog station at Berlin; 7. Inspector Gors of Grünheide.

showing what tasks are allotted to him. Here, in this connection, we must distinguish between the use of the dog in Security and in Detective Service and we must, in both instances, keep before ourselves this fact that the dog — as is the case wherever he is used — can only serve as an assistant in order to facilitate and make possible the fulfilment of the tasks that are laid upon his leader.

In the Security Service, the dog is the indispensable companion of the policeman, especially at night, and at all times in dangerous circumstances. During night service, his special work consists in careful inspection of out of the way places or unsurveyable districts that



Fig. 257. Tackling an Official.

are difficult to patrol, as for instance, the tortuous localities of the town, or places with a bad reputation in the centre, or the suburbs; furthermore, some outside beats which are deserted at night, extensive parks, river banks and similar places that might shelter criminals anxious to avoid the light of publicity, who lurk in dark corners, under arch ways, in empty buildings or sheds, in bushes or in hay-lofts, behind piles of goods and under bridges. In all these circumstances, the dog assists his master's eyes and ears, and calls his attention to the slightest noise which would escape the less acute

senses of the man. His capacity for tracking, his attention ever on the alert, his restlessness and his agility warn the policeman of everything suspicious, save much unnecessary trouble and makes his service more easy. Nay more, it is the dog alone who enables him to



Fig. 258. Caught in the act.

do full justice to his task which is to prevent disorder and unruliness, and not only to pursue the criminal after the commission of the offence, and thus to become the mere instrument of an outraged and avenging Law. The dog gives a moral support to the lonely official,

and at the same time, serves for a terror to those who would show fight, and scares them away from further offence. Thus, once again, he takes the place of, and helps to economise in man-power, because the leader with his dog does as much, and as good work, as a raiding party of two men. Service dogs are indispensable in night raids on a large scale, when desperate characters are to be arrested, to accompany the prisoners, to prevent attempts at rescue, and especially when the policeman is exposed to attacks or assaults. Of course, in such cases, the dog is only allowed to take an active part, when the leader himself is hard pressed and in danger. Then, and also in



Fig. 259. "The Good Samaritan".

following a criminal who has just been observed by the policeman in the very act of committing some nefarious deed, the dog is nothing but the elongation of the stretched-out arm of the leader, and a weapon which is not so serious in its effects, and more humane, than a service revolver which might injure the innocent with the guilty. When pursuing a fugitive, the dog must naturally only stop him, but he is never allowed to pull him down.

In districts that are regularly served by Police Officials accompanied with dogs, Public Security is obviously improved in a short time. Statistics from several large cities have clearly proved

this. Vagrants who fight shy of public places, occasional and habitual criminals avoid districts where they have to encounter not only the policeman but his successfully-searching and swift dog, who tracks out their holes and corners and is always on their heels. The present time with its general and ever more menacing and threatening insecurity, with its disregard for life and property, and with its undermining and defiance of Constituted Authority will no doubt demand more insistently the employment of the dog in the Public Service, and the outcry for the Police dog will become more general.

But the Police dog fulfils also another rôle; he is not only the pursuer of the criminal, he is also the champion of the helpless. When



Fig 260. Sepp-(Riedel) SZ 40228 with the little daughter of Herr H. Kurta headmaster at Iglau, whom he found, after being lost.

he scours the roads and the vicinity at nights, a service dog has often found sick people, weak people and "drunks" that had helplessly fallen on the way and were in many cases, in serious danger. The dog then showed his foundlings to his leader, or called him to the spot by his bark, thus effecting their rescue and bringing them to shelter. Children also that had lost their way, mentally deficient people that had wandered from home, and suchlike have been searched for and found by Police dogs, so that they were restored to their own people.

This last mentioned activity leads us, or rather belongs to the second sphere of employment, i. e. the use of the Police dog as detective. This use is based on his sense of smell and his capacity for scenting. Here, the service dog must either work on the track of the criminal, after having picked up the scent from his footprints, (or from objects left behind, or touched by him), and must thus if possible, point out the criminal himself; or, discover his place of



Fig. 261. On the track of the poacher.

hiding, or else, he must find objects which the wrong-doer may have lost or hidden away, in order to secure the conviction of the criminal by such proofs. If, however, such work on the track is not possible, the dog must be able to establish the identity of a suspected criminal, when he is alone or in company with others, from the correspondence of his scent with that which he had taken up from objects left at the place of the crime.

It goes without saying that the nose work of the dog can only be one of the many means which the Criminal Investigation Authorities must employ in discovering a criminal, and, at most, it can only be a means of assistance and not a final proof. It can, however, become such, when, as is often the case, a criminal, that has been tracked and caught by the police dog, makes a full confession to which he has been forced by moral necessity, caused by the nose-work which thus seemed to him incomprehensible and infallible. It is further obvious that the success of such detective work depends on many circumstances, which favour it, or on the contrary might



Fig. 262. At the thief's house.

make it hopeless from the start, but I cannot go further into all these details in this Chapter, which is devoted to other purposes. Whoever wishes to study this matter further will find all the necessary information in the papers published by the SV about the Service dog Department. I only wish to say here that we may take it for granted that, when working on a genuine criminal track au grand sérieux, the dog will do much better work because he finds it easier — all things being equal — than on a special test track before judges. The majority of criminals, who conveniently leave traces just suitable for such dogs, probably belong to walks of Society which do not take such very great care of their bodies, and sometimes they are perhaps "drunks"; their individual scent

(criminal scent) is therefore rather strong by itself and probably more perceptible at the place of the crime, or on the objects touched by the criminal, or even on his footprints than the scent of other people; especially when, (and this is the case more often than not), they were obliged to exert themselves violently and so perspired when committing the crime. To this may be added this consideration, that in the case of a younger and not thoroughly seasoned criminal, the inner excitement about the crime produces a stronger secretion of



Fig. 263. The proof of guilt.

perspiration — do we not speak in many instances of a cold perspiration caused by fear or anxiety? — which may perhaps, by its somewhat different composition, distinguish itself for the dog's nose from the scent of an innocent party; just as he can distinguish between a sick or wounded quarry, and one that is sound. Dr. Fr. Schmidt confirmed to me this supposition about this secretion, which is not indeed perceptible to our nose, and to the means at our disposal, and

which therefore we cannot prove, and he added that the secretion of milk which is so nearly related to the secretion of perspiration shows a rapid and extraordinary change in times of excitement. I found also later on that Prof. G. Jäger advanced the theory that a special anxiety scent of the criminal manifests itself in the same way.

Although at the beginning of the Police dog Movement it was only natural to suppose that the work of the protection and tracking dog might be amalgamated in one and the same animal, experience has shown that, in the majority of cases, at least in the Police Departments of large cities, it cannot be done. This is due perhaps less to the fact that the manner of training in both cases differs somewhat, than because the specially difficult duties of the tracking dog's



Fig. 264. Successful track work in German South West Africa.
The place of the murder.

services, pure and simple, demand such a careful training for both dogs and leaders that it cannot always be given to the larger number of the Service dog leaders, nor can the majority of the Municipal Service dog leaders acquire it by themselves on account of their other duties.

The success of all employment as an assistant of man depends in the first place on expert leadership, whereby the dog is always put in just the right place, and where the man is so well-acquainted with the peculiarities of the dog that he always knows how to interpret correctly the meaning of the dog's signs. A leader without expert knowledge

and affection for the dog will achieve only very mediocre results with the best trained dog; while an expert dog-loving leader can achieve good results with a dog of only fair capacity. In other words, the whole question of the Service dog is not only a question of the dog, but quite as much, if not more so, a question of the fitness of the leader. This plays a most important part in the employment of dogs in Detective Service. Here the dog and his leader must know each other intimately. The leader must never disturb the dog in his work; he must never interfere, not even when he thinks that the dog is at fault, but he must always remain in closest interior rapport with the dog. He must be able to read the meaning of everything the dog reports to him by the manner of his work, by the play of his features, and

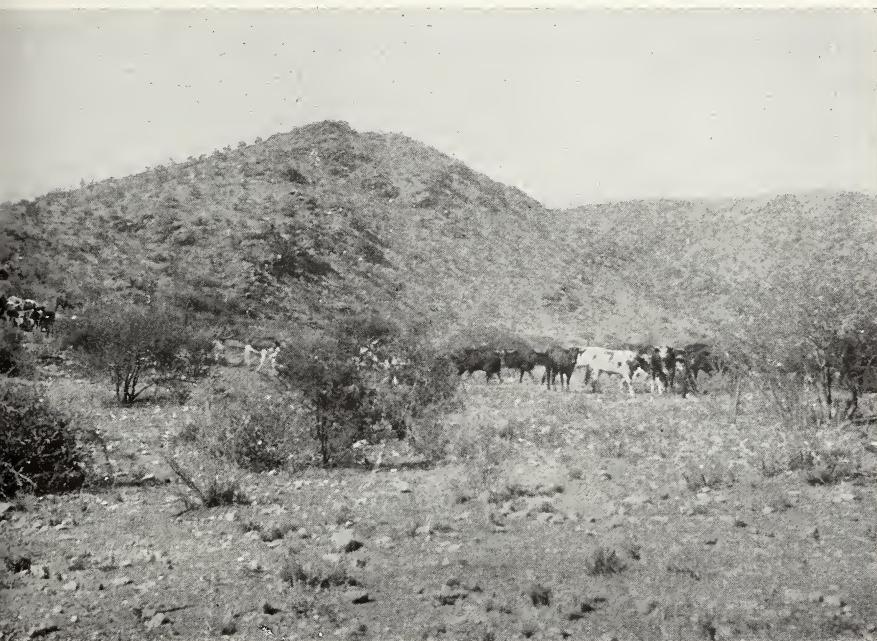


Fig. 265. Successful track work in German South West Africa. On the track of the murderer.

finally, by his success or his failure, which is often only apparent. The track-dog leader must be a psychologist, intimate with the soul of the dog and with that of the criminal; then and then only will he succeed. The track dog himself must, however, be trained very carefully and must be continually worked, for he is an artist, and an artist can only retain his preeminence when he is practising and continually trying to improve on his past efforts. It is possible to train a protection dog — and his guide — to be efficient for Security Service in a few weeks, but not so with a tracking dog for the Detective Department. The experience for such training and the

fine understanding of his dog is not possessed by every dog leader, and it is not given to everyone of them to devote the time and the trouble that is necessary for such a training. Finally, not every dog is fit for such service. Hence the different failures of "fools who rush in where angels fear to tread"; — they only hinder, and accomplish — nothing.

The credit for the introduction of our dog to the Police is a matter of contention between countries, towns and Associations. But what need is there for this? The Police dog is such a natural and obvious institution that it is nothing marvellous, if, in all places and at all times, such trials of his capacity, were made, quite independent by of each other. Everywhere, and at all times, there have been found people with a good dog sense who knew how to appreciate and use the activity of the dog. To-day, of course, in our civilised countries they have decreased in proportion as we withdrew ourselves from Nature, and passed into a state of so-called "Refinement". In Germany, at all events, the SV must be accorded the credit for the Police Dog Department in that it first called the attention of the Authorities to the possibilities of using the dog in such service, and was also the first to afford the necessary help. This venture, which was inaugurated with as many fears as hopes, soon justified itself and the Movement developed into an Institution.

The Police dog in protection service is no doubt as old as the first domesticated dog of the Bronze Age, for, from the first, he has always been companion and guardian, and from him evolved our present day Police dog in the Security service, probably by way of the faithful comrade of the old time night watchman with his horn and his halberd. We can also find traces of the tracking dog of the Detective Service quite a long way back in history. We find the oldest indications of them among the ancient Greeks. In Egypt an old papyrus was found in July 1914 containing a satire of Sophocles, written in very small script which was called "The Tracking dogs". This somewhat risqué burlesque treats of the theft, well-known in mythology, of the herds of Apollo by Hermes, and further, satyrs masqueraded as herding dogs, and pursued the tracks of the stolen herd and of the robber. This naturally is a proof that the Greeks in the time of Sophocles were well acquainted with such tracking service and employment of the dog. I have already mentioned in the First Chapter that, in the "Puoch von den valken, habichten, spreben, pfäriden, und hunden", by Heinrich Mynsinger, (which was published in 1473, but based on much older sources), he speaks of a regular Police dog training which extended to training the dog to stand up to a man, who was clothed in a stout coat of skins lest the dog should bite him during his education. Thus he was also trained to work on the tracks of a thief, in the same way that the bird dogs (retrievers) are taught to search for partridge and quail. In his "Jugenderinnerungen eines alten Mannes" (Youthful reminiscences of an old man) the painter W. von Kügelgen of Dresden also tells us that Police dogs had been used to seek for his

father, who had been murdered near the town. Finally, let us mention in connection with foreign countries, what M. Silber tell us in his "Hunden Afrikas" (Dogs of Africa) how that the Kaffirs use the native dogs to track the "spoor" of men, and, according to E. von Weber, they often go out and bring back their run-away lady-loves with the help of dogs. Of the trials in Belgium, — of the Police Administration in Ghent, — which indeed only extended to dogs in the Security Service, I have already made mention.

If so far, I have spoken in general terms of the Police dog, I wish accordingly once more to emphasise this, that *it was the shepherd dog who inaugurated the Police dog Movement, and that it is he*



Fig. 266. Police dog Kennel at Windhoek German South West Africa.

who is the moving spirit in it to-day. Shepherd dogs (*shepherd spitzes*) were the watch dogs of olden times: the tracking dogs of Sophocles were no doubt shepherd dogs, the Hovawarte again were shepherd dogs, and the dogs of Mynsinger, with which one "could track out the thief and the knave" were also shepherd dogs. Our shepherd dog is a born Police dog, for when he is with the flocks and the herds he is also "policeman". He maintains Law and Order; looks after the safety of his charges, punishes the delinquents, and turns back the trespassers. His development in the past from the dog of the Bronze Age to Hovawart, sheep, and cattle dog fostered, till they became most sharp, just those very characteristics and inclinations which would make him the Police dog par excellence: i. e. joy in work, devotion to duty, and to master,

mistrust and sharpness against strangers and unusual things, docility and obedience, teachableness and quickness to understand, and in addition, immunity to weather, uncommonly acute senses, with gifts for retrieving and seeking, which are supported by his special gait (going to and fro), by which he leaves nothing unnoticed and unsought wherever he may be. From such natural talents, to which must be added precociousness, physical and mental, everything can be developed. For what is Education but, first and foremost, the recognition and the development of the innate qualities of the person to be educated? For as with horses, with men and with children, so it is with the education of the dog. He who knows how to "educate" the qualities of his pupil is a master in every deed.

It was therefore these characteristics of the shepherd dog, which, when he was brought into the Police Movement, secured its success.



Fig. 267. Austrian Security Policeman with a Service dog who was wounded in defending his master from attack.



Fig. 268. Belgian Policeman with a Service dog in "service uniform", (a muzzle !!!)

At first when confronted with this Movement, we were all "tyros", and our first leaders had to be taught by their dogs before they could teach other dogs and, thus lay the foundation of the present imposing structure. After this was done, other dog races also could be drawn into the circle. At first, the circle of dogs that were fit for this Service was very small; hunting dogs were impossible on account of the one-sided direction in which their talents led them; others were impossible on account of their size and their weight; and others again could not be utilized, because they lacked immunity from weather conditions etc. Thus there remained, besides the shepherd dogs, only the Dobermann and Airedale terriers, both of whom, as we

saw in the First Chapter, have a strong strain of shepherd dog blood, and therefore owe their fitness for that service to this strain. Later on, the Rottweiler, and more recently the "Riesenschnauzer" (see picture No. 74) were included; but they also both belonged to the shepherd dog family. It is evident then that our genuine shepherd dogs kept in the van, and formed the largest number of recruits for the Service.

Before the War, the German Police dog was the inspiring ideal; officials came from far and wide, and over the seas to glean information. They returned home with fully trained dogs and when there, they imitated our ways and methods, and to a large extent, went so far



Fig. 269. Russian Government Training Centre in Skiernewicze near Warsaw.

as to ask for German instructors. Of course German Police dogs did service as well in our Colonies, in German China and in German Africa, and it is a further proof for the fact that the scent of shepherd dogs does not deteriorate in the tropics, when once they are acclimatised, when we hear that they were able there not only to serve as protection dogs, but were also very successful in tracking work. During the War, we had Police dogs everywhere in the parts occupied by us, especially with the Field Police in Oberost, (from Vilna to Baranovichi), where they were very useful.

The scope of the Service dog was not restricted to the Police Department, for long. The SV had higher and bigger ends in view. *The more Service dogs that were employed, the more advantageous it*

was for the future and the well-being of our race, and the greater the justification of the SV in demanding from the proper Authorities

Fig. 270. Training School for the encouragement of the development of the dog in Police and Watch Service at Petrograd.



the needful advantages and facilities, (as for instance, the introduction of a tax on all Breeding Kennels), and in arousing the interest of these

Authorities to experiment in canine breeding and hygiene. All these things gradually helped German dog-breeding as a whole, which up to that time had been considered by the State and the Communities as a "troublesome step-child" which, at the most, had the "value of a dairy cow for the purposes of taxation".

After a commencement had been made in demonstrating the utility of the dog, Service dogs were next installed with the rural police. A rural policeman without a dog is now unthinkable. He uses a dog in which are combined the qualities of the protecting dog and the tracking dog; he is also in a different position from that of the town policeman, in that he is able to observe and to learn



Fig. 271. The Postman's friend.

to know his dog with the idea of still further developing and exercising him. Tracking work in the country therefore has the best chance of success, because of the less complex conditions of life, and the smaller amount of traffic, and also because the leader of a dog can be on the required spot soon, sooner indeed than a town policeman, who has been summoned from a distance. After the country had followed suit, many local Railway Administrations commissioned dogs to serve with the Railway Station Police, to guard the lines, the Warehouses and the Company's property. With regard to the Postal Department, an extensive use of the dog is not feasible, but in unsafe rural districts the escorting of the rural postman by a protection dog can be most useful and ne-

cessary, because not every tramp knows that these rural Postmen never carry large amounts of money about with them.



Fig. 272. The shepherd dog as gamekeeper: a suspect.

In the protection of the fields, the dog accompanying the rural "limb of the Law" is an almost prehistoric institution. Rural constables and field guardians have probably, (just like the night

watchmen of the good old times), had dogs by their side, since the inauguration of their profession. In certain respects, the service



Fig. 273. The shepherd dog as gamekeeper: caught.

dog as "gamekeeper" is a new institution. The various kinds of hunting dogs are generally useless for this service on account of their one-sided development, by which they are trained for the game

rather than to attack man. For the forester, however, a reliable and sharp protection dog, who can also carry messages, is an absolute necessity on his lonely rounds, and for that purpose shephered dogs have been frequently introduced in game-keeping.

The Customs Authorities have, for a long time, fought shy of the introduction of the Service dog on the work of the Frontier; they lacked the understanding of the valuable service the dogs were particularly able to render them just there. The various attempts of far-seeing subordinates, as well as the recommendations of the SV, up to the present moment, have aroused no interest. Perhaps the War has already wrought a change, because, during that time, the frontiers have



Fig. 274. Guarding the Swiss Frontier.

been in many instances watched by dogs, it is true, only by express order of the Military, but now the employment of dogs on frontier service will become a necessity for another reason, i. e. to combat the use of dogs by smugglers. This smuggling had already been flourishing for a long time on the Franco-Belgian frontier, where especially powerful driving dogs from Flanders (*Bouviers des Flandres*), had been used, and on dark nights were sent out alone from frontier village to frontier village. On their arrival they found a good reception and the best of treatment, and were sent back to their owners either "light" or loaded with goods in exchange. It is true that a dog cannot carry very much, (20–35 lbs. over short distances), but goods of high value, such as point-lace or silk which were wound round their

bodies were quite a quantity, especially as such smuggling excursions, except on moonlight nights, can always be made several times a night, and with several dogs.

For the purpose of watching training-grounds, and wharves, factories and depots, the Army and the Navy had already employed dogs long before the War. Larger and small civilian establishments, coal mines, and warehouses had followed suit and the "Wach- und Schließgesellschaften" (Watch and Closing Organisations) had provided well-trained protection dogs for their guards.

In the preceding paragraphs, I have spoken of the scope of the dogs of the Police Department, which essentially demands protecting



Fig 275. Guarding the Swiss Frontier.

and tracking services from the dogs they employ. I shall now enlarge on the dogs in Military Service which are generally called War dogs, and Ambulance (Red Cross) dogs.

The war dog as a companion for the campaign, like the Police dog, is "as old as the Flood". During the battle the dog would jump to the assistance of his master, after having first, in case of need, gripped and disarmed the hand of his adversary. War dogs — partly protected — were already used by the Assyrians. We encounter them very often in Asia Minor and Greece, and during the great Migrations of our fore-fathers, the enemy, after having successfully overwhelmed the lines of warriors, would find in the rear, a second line, protected by a lager of baggage wagons and composed of the old men, the

women, and the dogs. During the Middle Ages, protected War dogs were frequently used, especially in England, where they were sent forward against the cavalry of the enemy with a fire-pot on their back, and a long spike protruding over their heads. The war dog of the present is not an active combatant in this sense, he is only a means of assistance and must place his watchfulness, his acute senses, and his swiftness at the disposal of the troops. The first trials in this respect must be dated back about thirty years ago, i. e. at the end of the eighties and the beginning of the nineties of the last century. At first, dogs were stationed at advanced posts and with Infantry Patrols, and it was their duty to give warning of the approach of the enemy in places which could not be easily observed, and to carry back short written reports to the main body in the rear. There is no further need to labour the fact that the dog is naturally most admirably equipped for the performance of the first part of this task. His ear is more acute than that of the sentry, his eye can distinguish better, at least in the dark, and when the wind is favourable, he has the advantage of his powers of scent. As a sentry dog, the war dog fulfills once more his primitive functions as guardian; of course loud barking is "strictly prohibited" and only a subdued growl is allowed. A special training, however, was required to produce a despatch dog. This training was founded on his obedience to, and love for his master. The dog was trained to swing like a pendulum between his two masters, to both of whom he must be thoroughly accustomed. This despatch duty also was not absolutely new to him; shepherds as well as hunters, in olden times had already had opportunities to send their dogs back to the house with news, or even as a sign of news.

Generally speaking, war dogs were only attached to Rifle Battalions; and about ten years ago they were once more given up, because their particular maintenance in peace time involved much time and labour, and the new means for conducting reconnaissances and transmitting messages, such as aeroplanes and captive balloons, Wireless Telegraphy and Telephones, flag-signalling and heliographing, and, last but not least, motor-cycle and bicycle despatch riders seemed to make the dog appear old-fashioned and superfluous. It needed the War to resurrect him once more. During the revolt of the Herreros in German South West Africa in 1904–05, "war dogs", (as was the former Official designation) were not used. Sentry dogs were acquired in large numbers, unfortunately a great many through dealers, but they were not properly trained. Practically only the shepherd dogs, of the whole canine conglomeration that had been despatched, were able to bear the dry heat and the sharp stony ground. We received very good reports with regard to the dogs placed at the disposal of the different Commands and of individual officers.

Armies of other countries had also adopted war dogs in their service. The outposts which guarded the Manchurian Railway during the Russo-Japanese War had, for the greater part, shepherd dogs with them, who, even in times of storm and bad weather, could

recognise and announce, sooner than the sentries, the troops which were advancing under cover to destroy the Railway. The small fortified frontier posts also on the never quiet frontier between Austria and Bosnia-Herzegovina had installed their native shepherd dogs. The French sentries on their mountainous and wooded Eastern frontier had, on the other hand, been accompanied by sentry dogs long before the War; the despatch dog had also been introduced there to maintain liaison, after he had been given up by our Army Authorities as useless. In Russia, attempts were made to send forward "Leuchthunde" (dogs with lights on their backs) to illuminate the country in front during the night, and to send dogs up the line with ammunition, while in Belgium dogs were used to draw machine guns.

To me the sentry dog service seemed the most useful, and profitable employment of the dog in the Army, especially as from that service it appeared that all the other kinds of service might be developed; and also, because he was needed everywhere, not only in the most advanced lines with the sentries and the patrols, with the field and the trench guards, or in the fighting zone for the protection of the shelters and the baggage, but also, and especially, at the base, where he must guard important points such as bridges, tunnels etc.; in short, everywhere where interruptions might be disastrous. Furthermore, he was indispensable for the watching of the valuable Army stores and for the protection of small detachments of troops against the revolting population. In addition to all these spheres of activity, he was also used at home to watch roads, depots and Ammunition Factories.

Another point in favour of the sentry dog was, and will be, that he requires no special training. A weather-proof, hard, and enterprising dog, one which is watchful and reliable, which has no objection to the leash and is always obedient, is necessary; as a rule, he need only be trained to march. Yelpers and biters are to be excluded, just as much as shy dogs. Out of such material a good leader can develop dogs that are required and good for any special service. From this it follows that in peace time an Army need not keep dogs in very large numbers, which, for various reasons, would be troublesome and of doubtful value. A small, well-trained, regular stock for trial purposes, and for the training of the substitute leader, would be quite sufficient. When required, the dogs themselves can be requisitioned from the country, just as is done with men, horses, motorcars and other War material; and it is evident that a list must be kept for this purpose, tests made, and even peace-time manoeuvres arranged.

The total number of dogs requisitioned for service during the War was about 28,000. All these dogs naturally were not shepherd dogs; other service dog races, although in much smaller proportions, took their share.

Opinions differed at the beginning of the War with regard to the use of the dog in the Service. The insufficient experience with dogs in the Rifle Corps, and the unfavourable experiences in the German South West African campaigns, which it is true, were

not the fault of the dog, but of other causes, had been no good advertisement for him; but subordinate Departments, individual Of-



Fig. 276. On the track.

ficers, and the troops themselves often asked for sentry dogs. The troops in the occupied territories also asked for Service



Fig. 277. Caught.

dogs in large numbers. The German Government in Belgium applied for such dogs to serve as watchers and protectors on the frontier,

and in the Railway Department, and as Police dogs in the Security Service; and at Fayenbois, in the Government Department of Liege, a Police dog Centre was established. In the Oberost District, Police dogs were used principally for the Secret Field Police as well as for the other usual duties. A Police dog Training School was also established, which later on was able to cope with the needs of the whole Eastern Front.

The particular characteristics of a stationary warfare of incalculable duration, which compelled the leaders to revert to means of war that had already been discarded as obsolete, brought back the despatch dog to a place of honour. Where heavy fire was raining on the trenches, and the effects of cannon and trench mortars was to upheave the ground, and to tear telephone wires and subterranean cables to pieces, when clouds of smoke, dust and poison gas made the work of the heliograph and the flag impossible, all these combined to destroy the means of communication between the front line of the fighting troops and the leaders in the rear. Carrier pigeons, whose work at all times depended on the time of the day and the weather, were not trained to such circumstances, and the way was closed to despatch riders by a hail of bullets and shells, while relays of runners could not be placed at all in such country, deeply scored as it was by artillery fire. In order to get to his destination under such heavy fire, the runner had to crawl on the ground from hole to hole and took up to one whole hour to cover a distance of one kilometre; further, it also took a very long time to send off full reports by means of the heliograph or the flag, even if the condition of the atmosphere admitted of such a proceeding. Thus the dog alone was left as *the* means of necessary and rapid transmission of information. The dog, who only offers a very small target, would dash through the bullet-swept area at full gallop and cover the whole of the journey at an average time of three to seven minutes per kilometre, and short distances under heavy fire in barely two minutes: five kilometres were generally covered in a quarter of an hour. Well-trained dogs accommodated themselves thoroughly to the urgency or otherwise of the work they had to do. On days when heavy fighting was in progress, the hotter the struggle, the faster they would run; and they would be distracted neither by man nor game. At quiet times, on the other hand when they were not excited by the noise of the battle, or outside the area under fire, they were more leisurely about their work, and occasionally allowed themselves to be distracted by the condition of the ground, or by the scent which they happened to pick up.

It goes without saying that many dogs died through fidelity to the fulfilment of their duty. If a dog which had been sent out did not return within a certain fixed time, it was taken for granted that he had been killed and the message was despatched once more. In special circumstances, two dogs with identical messages were sent out from the front line to the rear. Several dogs were wounded while carrying a message, some even repeatedly, but as soon as they

were fit once more, they were returned to duty. One dog lost his off hind leg near Peronne; he could only run his message slowly on three legs, but he fulfilled his duty, and dropped dead. What a loss of valuable human lives has been avoided through the use of despatch dogs!!!

The heavy losses in "runners" which the troops sustained in battle, in the Autumn of 1915, caused the commanders to reflect on ways and means of avoiding such losses. In Russia, dogs maintained liaison between the forward detachments, the Regiment itself, and the Higher Command over long distances and faultlessly. In cases where the distances were too long for one dog, stages were arranged, between which dogs ran to and fro. If any of these despatch stages had to be moved, the dogs sought out the new place by tracing



Fig. 278. Training of the Despatch dog.

out the track of the leader or the deputy leader. When a despatch stage was organised in any permanent way, the dogs would run over the accustomed route by sight only; they made short cuts and regular "passes". This system of dog posts worked so well and with such certainty that, Regiments outside the fighting area, availed themselves of its possibilities to save despatch riders and cyclists. This was done, although it sounds very strange, because, when a somewhat long report, or an order full of details about rations, or ammunition supplies, or removal of the wounded, (which must be conveyed over distances that are not too great), are sent by the dog, they come into the hand of the receiver sooner than when indeed spoken over the telephone, but taken down in writing.

The wonderful results obtained with the Despatch dogs of some Regiments paved the way for their general and Official recognition. The dog had made himself fit for Military Service, and proved his qualities which were now more than ever officially recognised.

The training for despatch carrying is comparatively simple; it is based on the dog's love for the leader to whom a deputy leader is attached, who must be one who is specially intimate with the dog. As soon as one of these two leaders is taken away from him, perhaps because wounded, the dog too must be taken out of commission until he has become accustomed to a substitute leader, which can generally happen, with suitable drill, after two days. It is very useful to train two leaders with their two dogs in such a way that, in case of need, both dogs can run between them. Dogs, who have been trained for a considerable period, accustom themselves so thoroughly to the men of their company that, in the event of losing their own leader or his deputy, they will work just as well with a



Fig. 279. Carrier pigeon dog; ready to start.

substitute leader in a very short time. The training of the leader was not always as easy as the training of the dog, because only a few of them have the gift for dogs.

It was a natural consequence of the peculiar characteristics of trench warfare to try and use the despatch dogs for other purposes also. The fighting of the myriads of rats that infested the trenches needed no special training. When off duty, most of the dogs waged a little war of their own against these pests with great zeal, and assisted the snappers and terriers that had been supplied for rat-catching. On the other hand, they were trained to carry forward ammunition, rations and carrier pigeons, as well as to unroll cables and wire,

which they were able to convey forward to a distance of about 450 yards.

As the result of his achievements in the War, the dog has become for ever duty bound to Military Service. Great care and attention are devoted to his breeding, the expert upbringing of Service dogs is fostered, and a special Army dog School for the training of Service dogs belonging to the Army, as well as for the instruction of the leaders, has been established at Sperenberg near Zossen.

The needs of War forced us to make still another use of the Service dog by employing him for transport, chiefly in hilly country, for bringing up ammunition and rations to the front line, and later on he became a recognised institution in our Army. His usefulness in this respect will not be confined to the Army. The employment of dogs for the traction of vehicles had been utterly neglected in the greater part of Germany, and was quite unknown in some parts because, being a somewhat prosperous country, we were able to afford a more dignified means of transport. The breeders and Breeding Societies should recognise that a new task awaits them, and that they must also bear in mind this new possibility of usefulness, although many a dog lover will revolt against such an idea.

I myself was formerly opposed to the transport dog, but the experience of the War, and my own observations in Belgium especially have converted me. That is why I have to-day adopted the view that a dog working in transport service is preferable to the lazy kennel dog, because the latter degenerates, while the former makes himself useful and does not lose his soul. From the point of view of body build, it is true that the dog is less fitted for this purpose than any other draught animal. In German this is expressed by the difference we make in speaking of "draught animals" and "pulling dogs", whereby we wish to say that this pulling is an exceptional and subordinate vocation for an animal, whose primary activity is with the flocks and herds, the hunt etc. The horse, the mule, the donkey, and cattle have a firmly knit body, and a skeleton tightly bound together by strong tensile muscles. They have moreover a stiff back, a hard hoof, a broad chest with well-set shoulders, or a short strong neck. To this must be added the weight of their body, with which they can strain forward on the commencement of the pull, no matter whether they pull by means of the chest, the neck, or the forehead, (in the case of the ox). The dog possesses none of these advantages; his body is not well-knit together in any place. On the contrary, he is one mass of springy joints, loosely connected. His ligaments and muscles are extraordinarily pliable, whereby they secure for him the highest possible agility and the shortest turning radius. Further, he walks on his toes, his pads are unprotected, and yet, in spite of all this, he can pull. He pulls, and pulls even heavy loads with a will, and always remains keen on his work and fit, as long as he is well treated, and harnessed in the correct manner. A double team of dogs is probably the most suitable, and in special cases, naturally, several teams can be harnessed one in front of the other. As a general rule,

it may be taken for granted that the large races with the broad "stand" are the most suitable, besides the short haired pointers which are mostly more firmly knit, and the remnants of the old Rude form such as, the Rottweiler and the "Riesenschnauzer". In a light quick team, however, our shepherd dogs would certainly give the greatest satisfaction, if only for the reason that their love of work and their vim would be a full compensation for their physical shortcomings.

We now come to the last kind of work for the dog in the Army, that of the Ambulance dog. In this connection, he is the product of modern conditions during the last thirty years, but if the dog has evolved in the care of the wounded for so short a time only, he has been working all the longer as a "good Samaritan", because that service has been for him a voluntary side duty; first, for his master and his master's household, and later on, when times were more peaceable and civilized, for all the "neighbours" whom he might find sick or helpless, or whenever he was sent out to search for those that were lost. From such traits the philanthropical work of the St. Bernard had been developed long ago on the Swiss, and other Alpine Passes.

The Ambulance dog, whose duty is to search out and find the wounded during and after battle, is a German product. At first it was intended to amalgamate this service with that of the despatch dog, but it was soon realised that a combination of such different tasks was not suitable. So far as I know, a man from Düsseldorf, the animal painter Herr Bungartz, was the first to call attention to the necessity of making a radical distinction between these two kinds of Army Service dogs. In 1893 he then founded the "Deutscher Verein für Sanitätshunde" (the German Society for Ambulance dogs), which, after many changes of centre and patronage, has its present home at Oldenberg under the patronage of the Grand Duke. This Association, which might have done much good, has suffered from the fact that, in spite of many influential patrons in the highest circles and many members who were active in their efforts for the wounded, it lacked experts with large views. The last patron recognised this very clearly when he urged on the Association the necessity for renewed and serious enterprise, and wished to amalgamate it with other Breeding Societies for Service Dog Races, calling on his own Society to collect the necessary funds, and exhorting the Breeding Societies to advance with the task of supplying and training dogs and leaders.

Soon after its foundation, the SV had already attempted to get into touch with the Ambulance dog Association for the purpose of procuring opportunities for service for its own dogs, but it met with no response. Bungartz was an incurable slave to the superstition that the only hope lay in the Scotch collie, because, in his opinion, that miserable German shepherd dog was not the slightest earthly use. Thus we were obliged to fight for ourselves, and that was very good. Unhampered by the shackles of the Ambulance dog Society, which up till 1914, was content to have from 6—12 Dogs

in its kennels, (later on the Scotch collies had to give way to the German dogs anyhow), we could place the training of the Ambulance dog on the broader basis of the shepherd and the Police dog training.

The SV owes much to the constant support of Major Funk in these attempts, for he interested himself by writing and other activities at the beginning of this century. The SV promoted the cult of the Ambulance dog by means of numerous tests for Efficiency, and by the constant supply of information, which it placed at the disposal of its amateur dog leaders to show them how to train their dogs in seeking out the wounded, — for which special directions were given, — so that when the need arose, a supply of dogs for this purpose would be ready to hand. In order to increase the number of these dogs and to cope with the need for several



Fig. 280. A shepherd dog team (Munich 1919).

thousands, the SV approached the Police Dog Authorities and requested them to increase the number of their Service dogs for this very purpose, for careful tracking, which was the characteristic of the work of the Police dogs, in the Security Service (and especially that of the Country Police), corresponds exactly to the work required of the Ambulance dog. When the searching Police dog barked on finding a man and did not merely content himself with pointing at him out, this barking was allowed by the first trainers of the Ambulance dog. These Police dogs, moreover, should be allowed to "point", or at anyrate this method of detection could be developed in them in case of need. The Police dog could not be dangerous to a wounded man, and he was trained not even to bite a criminal when he had found him. Further, the

scent of sick people who are helpless, especially the wounded, have a particular smell for him. Police dogs, when on duty, have, as I already said, given ample proof often enough that they know very well how to distinguish the difference between a sick and a sound person.

The fundamental and principal condition for the employment of the Ambulance dog was to have ready a supply of suitable dogs in sufficient number in the event of War. It was not possible for the War Office to keep a sufficient number of these on hand, because, in order to remain useful, the dogs must be constantly drilled. The Voluntary Ambulance Corps of the Red Cross, it is true, was very ready to help — and the SV placed one dog a year at their



Fig. 281. Baby's turn-out.

disposal for that purpose — but we could only be sure that these dogs would be kept at work and remain useful in the hands of but a few of these voluntary workers. The highest Authority in the War Office to which this was to be referred i. e. the Medical Department of the Ministry of War was very little in favour of the Ambulance dog Movement. It was only in the Winter of 1913—14 that they communicated with the SV and, after prolonged negotiations, it was decided to hold a demonstration of the powers of the dog in July 1914 on the range at Zossen under conditions as nearly corresponding to those of war as possible. In this trial, which was continued throughout the night, dogs of the Ambulance dog Society and of the Berlin Police Department had been allowed to compete, besides the dogs of the SV. Their achievements were so satisfactory that the Authorities

promised an official settlement of the Ambulance dog question in the near future, and essentially on the lines of the suggestions set forth in a pamphlet published by the SV about the preparation



Fig. 282. The Volunteer Ambulance Troop.

and the training of Ambulance dogs and their leaders. Three weeks later the terrible War broke out, and Ambulance dogs could not be used on our side in the first decisive weeks, and even for months

during open warfare. They were only introduced gradually, and attached to the various Ambulance corps. The Ambulance dog Society was entrusted with the duty of procuring the dogs and the Ministry of War established the Ambulance dog Replacement depot at Fangeschleuse near Berlin for the purpose of keeping up the strength of the dogs in the various establishments.

In trench warfare or in defensive actions, there is little opportunity for the Ambulance dog to function. His real chance comes when the troops are advancing in the open. An opportunity for such open warfare was only given, after the first few weeks, on the Eastern, the South Eastern and the Southern Fronts. There, that is to say, in Russia, Roumania, and the Balkans, Italy, and even in Asia Minor, our Ambulance dogs fully justified the confidence placed them, whenever they arrived in time and in sufficient numbers. It is not yet known, and probably never will be, how many thousands of wounded owe to them their lives and their restoration to health, but the future of the Ambulance dog with the Army is now everywhere assured.

The shepherd dogs, as in every other service, greatly preponderated among the 4000 Ambulance dogs. In the first few weeks of the War, and until the German Ambulance dog Association had fully established its work, the dogs had been sent to that Association by the SV Centres, where many voluntary Ambulance dog leaders had eagerly reported for work with their sentry and Ambulance dogs. At first it was allowed to accept such leaders who were unfit

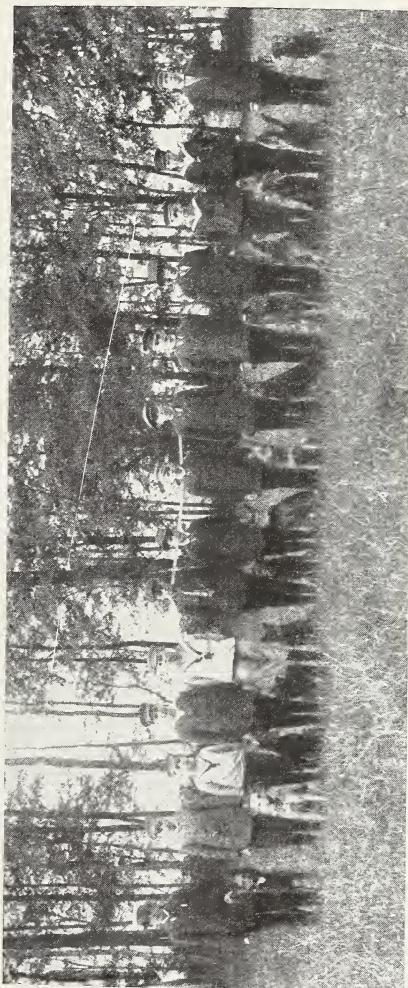


Fig. 283. Boy Scouts of the Despatch dog Station of the S. V. Town Group at Stralsund with the dogs worked there.

or not old enough for active service. Old and young SV members reported as leaders and even a few enthusiastic young Amazons tried to join. Many an old member has braved the hardships from start to finish; while all the young members were called to the Colours later, and many an SV leader sleeps under the green turf far

Fig. 284. From the course for Ambulance dogs of the Despatch dog Centre of the S. V. Branch Society at Wiesbaden. The dog finds a wounded man who had taken refuge in a hole in the ground.



from home. Until the whole Department was finally organised, a large number of our leaders were trained at the expense of the SV, and the SV published instructions for the Field Training of the Ambulance Dog, together with its preliminary appeal for gifts of Ambulance and Sentry dogs, and for Ambulance dog Leaders.

Ambulance dogs were also attached to the enemy armies. The English had already made some trials with certain Ambulance

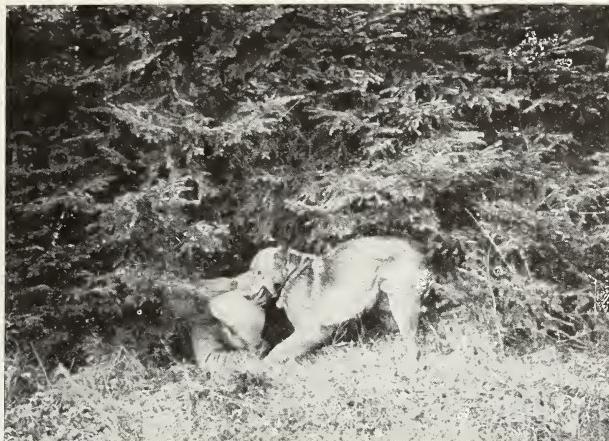


Fig. 285. From the Course for Ambulance dogs at Wiesbaden. The dog takes from the wounded man he has found part of his equipment to bring back to his leader.

Dogs during the South African War in the nineties of the last century; and later on they kept in readiness, recognised by the Army Autho-



Fig. 286. From the course for Ambulance dogs at Wiesbaden. The dog on the leash brings his leader to the wounded man he has found.

rities, a small number of trained Ambulance dogs under one particular War dog Officer. In France, too, at first, the question of the Ambulance dog had been a matter of private enterprise, and the

Fig. 287. From the course for Ambulance dogs at Wiesbaden. The dog on the leash brings his leader to the man he has found.



Authorities had well understood how to create a fashion and to interest the ladies in this Movement. As far back as 1910 or 1911, the Ambulance dog had become an official Institution and an Army

dog Kennel was established at Fontainebleau, from which trained Ambulance dogs and leaders were detailed to the different formations. In Italy, as in Switzerland, the Ambulance dog Movement was also officially regulated, while in Belgium, Holland and Sweden, private Associations took the matter in hand.

. Let us now consider the duties of the Ambulance dog, and at the same time remember the conditions of open warfare. The Field Service Regulations order every formation to search the field of battle in its vicinity after the fight in order to gather up the wounded and to protect the dead against pilferers. During the fight only a part of the wounded can be collected and sheltered, and a thorough search can therefore only be made after the battle, that is after the cessation of the enemies' fire, generally at night. When night has fallen, the search for the seriously wounded who had to be left lying is, however, very difficult, and is often very unsatisfactory, because, on account of the enemies' observation, torches and other lights can only be very seldom used. Even if it is possible to use lights, there are plenty of dark places in areas intersected by trenches, or under cultivation, in ditches, behind hedges, in the undergrowth of the woods, or in fields with high crops, where the seriously wounded, who are lying unconscious, or in a very weak state, cannot call the attention of the searching troops to themselves and therefore might easily be overlooked. This danger of being missed is so much the greater because the wounded often try with their last strength to get under shelter to be protected against further wounding, or against the risk of being ridden or driven over. Thus there are sometimes whole nests of wounded at such sheltered places which, for that very reason, are very difficult to find.

In caring for the wounded, the first duty therefore is to find them in the shortest time. It is not possible to alter the conditions of the battle field, and to make more acute the eyes and ears of searchers, who are excited by the previous strain, and tired through nerves overwrought during the battle. Here, as so very often, when human senses fail, the dog must help. The Ambulance dogs must run to, fro, and about in an area of something like 220×54 yards, smelling out the tracks of the wounded, and announcing them to their leaders. When they are found, wounded soldiers who can call or give signs to the stretcher-bearers need not as a rule, be tracked by the dogs, and the dogs must pass by the dead without taking any notice, so that they may not lose any time which might be precious for sheltering the living. Our experiences have proved that well-trained dogs can do this and never point out corpses.

It goes without saying that a useful Ambulance dog must be thoroughly well-trained, prompt in obedience, and a very St. Antony himself to the allurements of the chase. The searching work is tracking, pure and simple, and natural to every dog, he can therefore be instructed for this purpose in a very short time, and here the shepherd dog is the animal par excellence, on account of his natural tendency

to go to and fro. The only thing that now remains is the way in which the dog announces to the leader that he has found a wounded man. Here too the difficulty is to be found not so much in the dog as in



Fig. 288. Ambulance dog leaders.

the man. An old experienced leader who has become one with his dog will immediately recognise from the dog's mien whether the task has been accomplished, but unfortunately there are not many such leaders, and the abyss must be bridged somehow.



Fig. 289. Ambulance dog announces his find by barking.

There are two ways in which a dog may make his report, by barking or by returning to his leader. The bark seems to be the more natural method. By his voice the wild dog called to his companions when hunting in the pack, and in the same way the hunting dog gives tongue when the stag is found. All dogs do not do this naturally, but they can be trained to this. With regard to the search for the wounded, it would also be the most natural and rapid proceeding for a dog to give tongue. In such circumstances, the bark of the dog has a note which is unique; but in warfare, there are other conditions to be taken into account, for when several dogs are searching at the same time, as ought to be done, giving tongue might lead to mistakes;



Fig. 290. Earlier method of announcing a discovery by bringing an object. The Ambulance dog takes the helmet of the wounded man.

but the greatest obstacle is the enemy. He cannot for the sake of his own safety have any regard for the searching for the wounded; the greatest silence therefore is just as imperative as the avoidance of any light, and thus the return of the dog to make his report is the only possible method.

Before the War, it was the opinion of trainers that the dog might bark as well as point. The experience gained, however, has done away with the barking, while it was desirable that the dog should bring a piece of the equipment of the wounded man he had found as a sign that he had found him. I have always been opposed to this way of reporting because, first, it diverts the dog's attention more

to the debris lying round instead of helping him to concentrate on the man, and, (which is the chief objection), it can become a serious danger to the wounded man himself. If the dog does not find any object close to the man which he can take up, he will try to tear off such a proof of indentification from the wounded man himself. This might not only be a serious matter of anxiety to a seriously wounded man — especially when the dog tries to drag something off — but also might cause him to make repelling motions which might incite the dog to snap at him. Again, the wounded man might be seriously endangered by the opening of his wounds, for experience has since taught that many dogs would tear off the emergency field dressing which the man had himself applied.

In order to avoid this danger without foregoing the visible sign, the dog was taught to bring in his mouth a small leather "sausage", hung from his collar by a leather strap, which was called the



Fig. 291. Ambulance dog taking the "bringsel" in his mouth on discovering a wounded man.

"bringsel" (the object to be brought). As soon as the bringsel was brought to the "Wow-Wow-Lieutenant", (which was the Army nickname for the Ambulance dog leaders), the latter had to take his dog on the leash, and was then led to the wounded man. This method has a great many disadvantages. First, it condemns the dog to work with a collar and dangling bringsel, and after finding the wounded man, to return to the leader with his mouth tightly closed; thereby restricting his breath, for in rapid movement, the dog breathes through his open jaws. Further, what shall happen, when this dangling thing, which gets caught everywhere, is torn off; what is to be done? It might also happen that the dog on his way lets go the bringsel, when he snaps at a biting fly, or when he wants to have a hurried drink, or for some other quite natural reason, and then perhaps forgets to take it in his mouth again. Then the leader, who misses the required sign, will send the dog back once more and



Fig. 292. The Ambulance dog on active Service. Setting the dogs on to seek.

it is a question if he will find the same wounded man again. The dropping of the bringsel may also, especially when the dog is very tired, or had not been sufficiently trained in relinquishing, take place just when he sits down before his leader, and this again can lead to errors, especially in the dark; just as when a returning dog who has not found a wounded man at the last moment remembers that he has to bring something and takes the bringsel in his mouth. All these mistakes can also be caused by nervousness of the leader, and there were not a few dogs who, irritated at the thing dangling at their breast took it in their mouth immediately they were out of sight. On the training field, Ambulance dogs were frequently hung with a bell so that the leader might know the whereabouts of his dog, but even these bells, although they were



Fig. 293. The Ambulance dog on active service. Finding a wounded man.

a great deal shorter than the bringsel, proved a nuisance to the dogs; and many a dog took his bell in his mouth. This bringsel was invented by a shepherd dog at Fangschleuche near Berlin who, when he could not find a single piece of equipment, stone a twig, nor even a tuft of grass on the training field, took the end of the leather strap which was dangling down from his collar in his mouth and thus returned to his trainer having discovered his "wounded man". That wonderful psycho-analyst Herr Pfungst from Berlin, who advised this official Training Establishment as an expert, and whose craze it was to avoid irritation by signs — naturally he had no personal experience with dogs at all — was able to push through this sausage invention of the bringsel for the dog, in spite of the most serious and urgent

objections of experienced dog experts, who were constantly at work; and although too the Training Establishment at Bonn under Herr Flaccus, Commissioner of the Police, had long before proposed a much more simple and satisfactory method of bringing home reports which avoided the afore-mentioned mistakes, and had been proved to be feasible. Major Berdez of the Swiss General Staff, who for a long time had studied the Army dog, later on suggested another method of training very similar to that of Bonn, which also avoided the faults of the bringsel; but on our side, the bringsel remained in Army use, it is true, but during a time in which open warfare was not the rule.

Both methods, that of Bonn and that of Major Berdez have this in common that the dog is not hampered with any piece of equip-



Fig. 294. The Ambulance dog on active service. The dog shows his leader the way to the wounded man.

ment in his search; that he can never lose the bringsel, that he does not regard the delivery of the object to his leader as the end and aim of his task, but on the contrary that he must fetch the leader and bring him to his goal, i. e. the wounded man. Another advantage here is that the most difficult part of the training is accomplished by the leader and not by a stranger, i. e. the "wounded man" on the training field.

The first condition of success is that the dog should conduct his search without anything likely to hinder him. A dog who must be able to overcome every obstacle in his way, who in case of need must jump or swim, and at all events must gallop more often than not, must not be let or hindered by anything in his movements, for in

his search, he must force himself through jungle and high crops, through dense under-growth and hedges, through high thorns, vines and tangled nets of wild growth, through barriers of branches or barbed wire, in fact everywhere where man cannot go and penetrate. Even a simple collar, however, involves the danger that he may become caught and that he will be unable to get loose again in spite of all his efforts. This generally means the end, not only of the dog, but, also, which is the principle thing, the search for the wounded is made impossible. No reasonable leader allows his dog to work in the open alone with a collar round his neck. The dangling bringsel with its hook increases the danger of getting caught, and if it is torn off, then where is its use?



Fig. 295. The Ambulance dog on active service. The dog shows his leader the way to the wounded man.

Well meaning theorists wished to hang on our Ambulance dog, — after the picture of the well-known St. Bernard dog "Barry" with that inevitable little cask of cognac on his back, — a wonderful collection of leather equipment, surmounted by a mighty Red Cross, and hung with little bells and lanterns; nay, they even wished to pack on his back rainproof covers and groundsheets, emergency Field Dressings, bottles with "a drop of comfort", maps and emergency rations, and even to put rubber goloshes on his feet. The grim earnestness of the War soon did away with all such contraptions, and for Military work even the simplest collar was too much and too dangerous. Any equipment is always superfluous. The wounded man, when found, has no longer any need to roll himself in covers, to dress his wounds, to drink, or to write a report, because the dog is there for the sole

purpose of fetching his leader as soon as possible, and in a few minutes he will do it much better than all these adventitious aids. In the majority of cases too, the dog will find the wounded man unconscious, and all his fine portable pharmacy will be of no use. The dog himself requires nothing, even in the heaviest of rainstorms, he will find a dry spot somewhere where he can curl up, and I have no doubt he will like that better at any time than to drag about such a heating and chafing cover.

There is a certain connection between the Ambulance dog and the blind man's dog. The Ambulance dog Association therefore took up this Service dog type and devoted its considerable resources to secure its training. According to the statement of blind people who have used such a leader for any considerable time, our shepherd dogs are said to be especially fit and reliable in that service. The blind man and his dog have been a familiar feature in our streets for some time; formerly, it is true, the dog, generally a poodle, was only known as the receiver of gifts with the hat in his mouth, but the blind-man's dog of the present day is not used for such a purpose; he must rather be the eyes of his master, lead him safely through the maze of traffic, and promptly call his attention to unnevenesses in the road, and obstacles in the traffic, by sitting down. Experience has proved that a careful training develops the dog to this extent, but again, in this respect, it depends entirely on the leader how long he remains efficient or, vice versa, how soon he becomes slack. But this leader is a blind man, who unfortunately cannot see, and therefore cannot correct the faults of the dog; accordingly we must not build too fond hopes on the efficiency of these dogs for the sake of the poor blind people themselves, to save them disappointment. At all events, we cannot lay down a hard and fast rule, for although such an animal may be useful under favourable circumstances with an animal loving blind man — preferably in the country and in small country towns — he can, and must be equally useless under other conditions, as for instance, in the traffic of a great city and in the keeping of a careless man with no real sense for the dog. In such cases the dog, instead of being a help to the blind man will become a danger. For my part, I regard him chiefly as a companion for his master to be a source of comfort and pleasure to him in his quiet lonely hours.

It has also been proposed to use the Ambulance dogs who returned from the War in rescue work on the high mountains. Such service would naturally be conditioned by circumstances. In rocky districts it is obviously useless. The dogs can therefore, as a general rule, only be used to follow the tracks of the missing from the last place known to have been occupied by them, in order to give the searchers an idea of the direction in which they have gone, but in most cases the track to be followed will be old and will lead over rocky ground where the scent does not linger. Moreover the dogs can be used to smell round the hollows below the crags, which are grown over with dwarf trees, and, last but not least, to find people that

have been engulfed in the snow. I have no doubt that our shepherd dog would be very fit for such a service. Von Navarini who served on the Italian frontier on the high Alpine Wall proved that of all the dog races, only our shepherd dogs and the Dobermann pinchers



Fig. 296. The blindman's dog.

were absolutely suitable for the snow and ground conditions in those altitudes. Of course the distribution of such life-saving dogs to the different Refuge huts would be a fatal policy. There, the dogs would very soon deteriorate and become inveterate poachers. They can only remain efficient if they are constantly kept in useful work, as for instance in the hands of the Mountain Police stationed in those districts. These police must have a dog at any rate as a companion, and the service of the life-saving dogs does not involve the same searching work as that of the Ambulance dog but corresponds more nearly to the activities of the genuine Police dog.

At the conclusion of this Chapter, devoted to the shepherd dog his character and his service, let us now also consider the relation of our dog to descriptive Art. There are of course many dog pictures, but only a few of them can be considered good, and with regard to the shepherd dog this is especially so. No doubt it is often very difficult to unite the Canons of Art with the requirements of the dog-lover, but in spite of this, one should not cloak and excuse every faulty drawing under the name of "ART". He who cannot see correctly or cannot reproduce what he has seen in such a way that it corresponds to the original should leave animal painting alone. Apart from this, he may work his wicked will in the direction Cubism or whatever craziness is the fashion for the moment and doubtless achieve masterpieces for his adorers. But the dog-lover does not wish to see a few splashes of colour, nor impossible bodily contortions, nor some distorted conception of what the breed may evolve during the next 48 hours, which may appeal to the mind of the futurist as the apogee of all Perfection. The dog-lover wishes to see his friend in a natural, and therefore correct presentation, and with the right expression. To reproduce him in this way, however, requires an artist who is not only a master of form but is also a dog-lover, or still better, one who was born with dogs, brought up with dogs, and lived with dogs. Only such an artist knows the dog's soul well enough to catch the slightest emotions and to reproduce them in his picture or drawing. Most dog-lovers prefer the photograph of their friend, (if it avoids being too obviously amateurish on the one hand, and too glaringly the product of the trade publisher on the other), so long as, at least, it, reproduces possible and genuine dogs. It is true that in the matter of the picture, the price must be a consideration, but it is just the right kind of dog people, who lack the big purse and those that have it are generally so thoroughly inartistic and blind to Art that we cannot expect any help from them.

Braith and other excellent artists have given us true and life-like representations of the herdman's dog in his vocation, but in their pictures the dog as a rule is only a minor detail. In the First Chapter (picture No. 91) I showed the head of a working dog; and the Munich painter Strelbel painted a magnificent shepherd dog head with a wonderful expression for "Jugend" in 1918. More recently, A. W. Herz of Berlin and W. Tag of Dresden published some excellent

pictures of shepherd dogs, and the picture of the latter is given as the frontispiece of this book.

The increasing popularity of the shepherd dog since the beginning of this century naturally found expression more and more in jokes, pictures and everywhere else. Shepherd dog pictures abounded, on hoardings, Advertisement Kiosks, picture postcards, library labels (*Ex Libris*), trade marks on cigar boxes, and bottles of schnapps, and even on embroidery patterns. For the most part, they contribute nothing to the satisfaction of the dog-lover. To complete my list I should like to mention that a shepherd dog was billed to perform as one of the members of a "barn-storming" theatrical company. To-day very often the shepherd dog shares with Charlie Chaplin the laurels of the Cinema, and that is only natural, because in detective dramas he is absolutely indispensable. At the same time, there are also quite serious and instructive films about the shepherd dog working with the flock, and in other service, which have been exhibited by the Deutsche Lichtspielgesellschaft (German Cinema Association) in Berlin.

Up to the present, the sculptor has devoted his art to the shepherd dog in miniature works only. The Berlin artists Missfeld, and Professor Wiese produced some very effective miniature bronzes, and Herr Diller of Stuttgart executed two splendid pieces for the Geislinger Metallwarenfabrik. Kayser und Sohn of Krefeld have produced some shepherd dog miniatures, bronzes, and bas-reliefs which, however, did not correspond so well to our conception of the dog. Godet und Sohn the Court Jewellers of Berlin took up the matter, and produced some very striking pieces of jewellery with shepherd dog heads, as was the case too with the firm of G. Sickinger of Pforzheim.

Porcelain Factories, too, took up the shepherd dog, after the Porcelain works of Rosenthal at Selb in Bavaria had shown the way. Messrs. Bing and Gröndall of Copenhagen produced a beautifully coloured piece of china. The best work of Art in china, however, is undoubtedly the couching shepherd dog modelled by Herr Pflug of Berlin and produced by Gebrüder Heubach of Lichte in Thuringia.

I said above that the large majority of the dog-lovers is satisfied with photographs and for various reasons must remain so. The art of the lithographer, however, which in recent times has attained a high level, was able to produce wonderfully speaking likenesses and thoroughly artistic pictures. As far as this Art is concerned with our dog, we must decide whether the more valuable thing for us is the picture reproducing something of the life of our dog, or a reproduction of the dog for a critical examination of his points. For a task of the first mentioned kind, the choice of the subject, the position of the dog, the surroundings, the execution, and the representation of the picture must be left to the judgment of the artist. He must unite in himself pure artistic feeling, and cunning craftsmanship, otherwise he will only accomplish blundering work, which is imper-

fect from the picture, point of view and constrained, stiff, and unnatural in presentation.

The most suitable position for photographing a dog is a full-length side-view. The picture should always be taken out of doors, for all studio pictures give an inartistic, stiff and unnatural effect, especially when taken in front of a painted background. Even a professional photographer will seldom produce a real doggy picture, not even out of doors, unless he is at the same time a dog-lover, because, for him, the principle thing is a beautiful picture and not necessarily the correct position of the dog. The best pictures are generally taken by experienced dog-lovers with a small hand camera, which produces pictures varying from 8×10 cm to 12×16 cm ($1\frac{3}{4} \times 2\frac{1}{2}$ inches to $2\frac{1}{4} \times 3\frac{1}{4}$ inches). The camera must be provided with a rapid lense (6.3, or preferably a 4.5), and a good view finder. The so-called "Reflex" Cameras are said to be particularly suitable. Of course

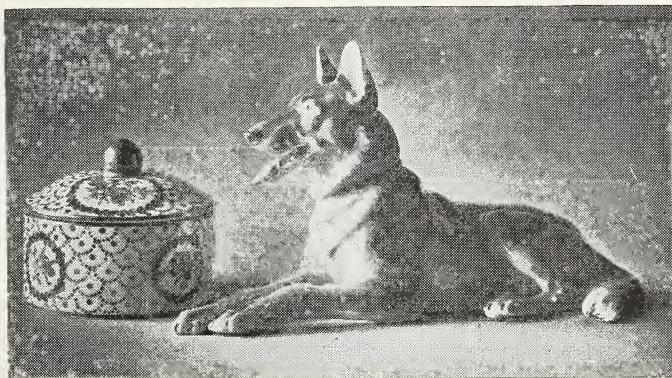


Fig. 297. Porcelain dog by Gebr. Heubach, from Lichte in Thuringia.

only snap-shots can be taken and therefore the question of light is very important. In cases where an indoor picture must be taken, a strong steady light must be available. Magnesium light must on no account be used, it always gives ugly pictures and startled dogs; and many dogs become furious at the sudden light. The photographer must not be too economical with his plates and films; and he must be prepared to give any amount of time and trouble, if he really wishes to produce good negatives suitable for printing; for this, and the making of a "block" to advertise the dog, is more often than not the chief end of the picture. As the printing block is always somewhat weaker and vaguer than the picture, the original itself should be full of detail and contrast, sharp in outline, and printed on slow printing paper. The soft tones of other papers which are, it is true, very artistic in effect, do not make a really good block, and produce a blurred image.

In order that the dog shall show himself at his very best, in a natural position, the photographer must find out what the dog wants, and not vice versa. He therefore must never place his camera on a tripod, but must keep it in his hand so that he may be able to place himself on a level with the dog, and make a snapshot at any moment, whenever the dog shows the required position in the view-

Fig 298. A good photograph which shows clearly the defect in the "stand" (the off hind leg is placed too far back).
Anni vom Humboldtpark SZ 66522, Champion 1919/20.
Champion of Holland 1919.



finder. As the camera is generally held breast high, the dog at such distances, and taken from above would appear foreshortened and huddled, the photographer therefore must kneel down in order to bring his lense and the dog in the same focal plane.

High lights and deep shadows must be avoided as much as possible, and on no account must any shadow or streaks of light fall

on the dog. The photographer must therefore also take care that his own shadow, when standing between the sun and the dog does not appear in the photograph. Other distortions and ugly shadows will also appear in the picture, if the dog is standing too near a solid background. The surroundings must be chosen in such a way that the dog will stand out in relief, and the blending of his colour with that of the surroundings in the picture must not be forgotten. A dark coloured dog, for instance, stands out very well in relief from green foliage, but in the picture the contrast will be practically nil. Therefore a uniform quiet light light, toning the foreground and the background, is a sine qua non for a good dog picture. Lawns and bushes are to be entirely avoided as a background, for they give an inharmonious effect, the dog does not stand out sufficiently, and, where the grass is rather high, not only the paws but the legs are also hidden. On the other hand, a flat sandy place, a well-lit road, or a slight rise in the ground, behind which there is the open sky as a background, are just what is required to photograph the dog successfully. If any of these cannot be found, he must be posed in a well-lit place in front of a light-coloured wall; about two yards away from it. If the dog does not stand out clearly enough from the wall, a white sheet must be hung on the wall. The most natural picture is always when he stands alone. If he is on the leash, there is always the danger that he will strain forward on it, and then the position of the neck, as well as that of the fore and hind legs, will be constrained. If the dog must be held on a leash, this should only consist of a thin cord or even a wire; but if he stands free, the collar must be taken off, because, as a rule, it interrupts the even curves of the throat and the back of the neck. If the dog must be on the leash, a simple cord which is covered by the hair is the best collar; any other broader collar produces ugly rufflings.

When taking the picture, the lense must be held at right angles to a point about the middle of the dog's body so that distortions, which would be at once apparent if the picture were taken from an oblique angle from the front or, — what is still worse, from the rear —, may be avoided. The dog must also stand on the level, and must not have his hind legs too long stretched out, either towards the photographer or away from him, for this again would produce a distorted and unpleasing picture. The best position is one which is free, easy, and natural, when the dog is standing on all four legs — not as if he were walking — but in such a way that they do not entirely hide each other. The hind legs must not stand too far back, because this would have a bad effect on the lines of the back; neither must they be pushed under the body. A slight turn of the head towards the foreground is very striking, but it must not be overdone, or the head would be given too much the effect of a silhouette and become flat. The head and neck must never be artificially drawn up or stretched out, because such a position is unnatural to the shepherd dog.

A very inelegant and snake-like position is always produced when a piece of meat or something similar is held in front of his nose

to attract his attention. Whenever this is necessary, such an enticement must be held straight in front of him at a distance of at least six yards, and for a moment only. Generally, however, a chirruping sound will be sufficient to produce in the dog's mien, at the psychological moment when the snap shot is made, that eager and expectant

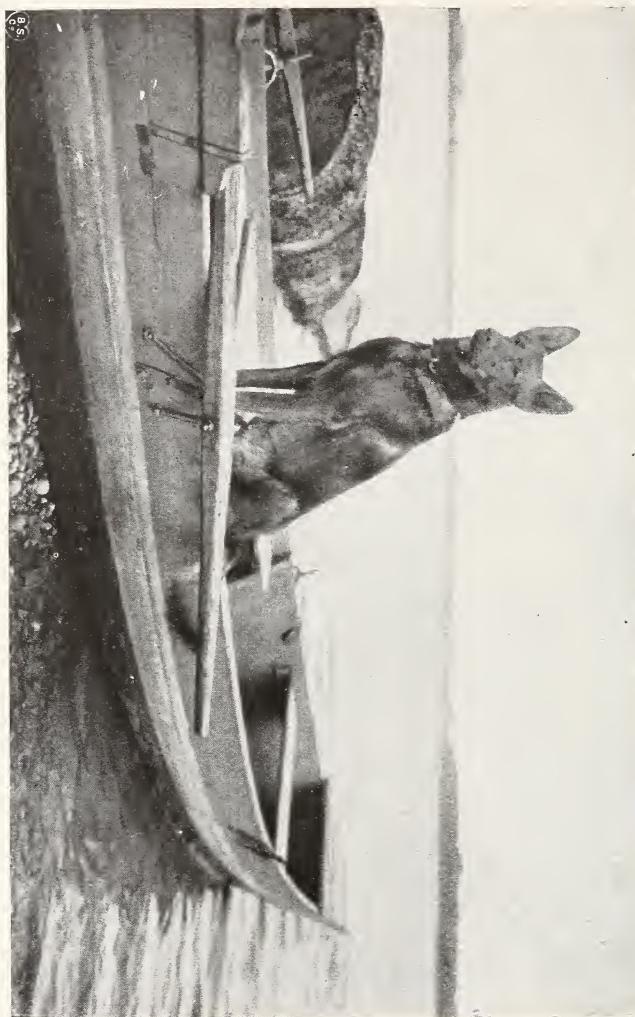


Fig. 299. The Watcher. Prize Photograph in a Competition.

expression, which is so effective in a really good picture. Every interference with the dog's position, which would result in anything like artificiality, must be strictly avoided. If you try to place the leg in a certain position, the dog is sure to change it back again, and moreover will not be at all grateful for such interference, he will

look and act like a mule making the best of a bad job. He is not so full of conceit as some human beings; to him the process of being snap-shotted is an abhorrence, and all the preparations for this ordeal fill him with disgust. The best way to secure a good result is to wait patiently till the dog by chance adopts the proper position in a good light. Those, pictures which are the result of a lucky snap-shot at the critical moment, are always the best and give the most speaking and natural likenesses.

If a reproduction of the dog is desired for critical purposes only, that is to say, if only a life-like picture is required, then the photographer must patiently wait for just such a golden opportunity. Like the hunter, he must then perseveringly follow the quarry in order to take advantage of the most favourable position. "Bust portraits" produce the best effect if the head is turned about 3/8ths to the side and slightly downwards. If taken directly from the side, the head will appear flat and lifeless, and if taken from an acute angle from the front, it will be distorted. Then the nose will appear over-elongated, the forehead fore-shortened, and the ears like those of a bat.

Every year the SV organises several competitions for photographs of dogs, with valuable prizes, and it thereby encourages shepherd dog people not only to send in good artistic pictures which will gain for us new friends, but also, and especially, to observe their own dogs, to study their body-build, and to enter into the soul of the shepherd dog. The large collection of SV Canine pictures, just as our collection of printing blocks and a number of Cinema films suitable to illustrate lectures is at the disposal of all SV members to examine and to use.

The life and activity of the shepherd dog form a mine of information for such lectures. Years ago the SV had also organised a competition for essays descriptive of the shepherd dog, and the first prize was awarded to Herr Löns. In addition to literature, which is entirely a propos to our subject, — extracts of this book have been published in English, Dutch, and Spanish, — Magazines have from time to time published some articles on our dog. The greater number of readers, however, show all too little interest, and sometimes even hostility to the dog, to encourage such ventures. The poet of the shepherd dog has yet to be born, and we know of only one touching Epitaph written in the style of Kassian Klubenschädel in his youth, which was dedicated by a faithful SV man to his departed companion and published in the SV paper.

Allhier Liegt und schnauft nimmermehr der "Hektor",
Ganz Umsonst hältst du ihm nun würste Und SPeck vor;
Er vrissst sie nimmermehr — OHJEH!
Denn er starb selber Einstweilen am BauchWeh'.
Eine Toteswurst Hat man ihm Hingeschmissen,
Und er frass sie, und ward dadurch aus seinem Blühenden Leben gerissen!
Hätt' er siē nicht gefressen aus Fremder Hand, wie mann ihm oftte befael,
Alsdann hätt' er auch noch nicht erlitten Diese Qual!
Aus ist's und fertig mit dem Beissen Unt Bellen
Wie er's tat, wenn der briefbott kam und in anderen Fällen.

Um ihn trauern nun Die Freinde und bekannten
Die ihn -- solange er x und war und lebte — von Angesicht oder par
Renomme kannten,
Du abber OH FRemder Wantrer Fleuch, geh schnell vorbei!
Sunst, wenn er dich riecht, und dich nicht kennt, steht er auf und reisst
Dir die Hosen entzwei! !
Dieses issst gewitmet von denn Hinterblibenen.
A. D. MCMVI

Or, shall we say with many apologies to the Author of the above, and to Hector?:

"Here lies, and never more will breathe again,
That hero Hector, victim of a pain.
Sausage and bacon held before his nose
Leave him as cold as his poor upturned toes.
Alas! Our Hector, ne' er again will wake,
Dead as he is through common "tummy-ache".
A baleful sausage flung by alien hand
Secured his transfer to another land.
Had he but spurned the fatal "mystery-bag",
He'd now be standing here, with tail a' wag.
No more will postmen go in fear of death,
For Hector's powerless, through want of breath.
So lies he, mourned and missed by all he knew,
For such a dog of friends had not a few.
Pause not too long, O Stranger, near his bones,
Or you may fill the welkin with your groans.
Lest Hector rise and seize the tempting chance
To snap a morsel from your worthy pants.
This thus we weep who now are left behind,
A second Hector we shall never find."

A. D. 1906.



BREEDING.

"The business of the breeder is no lightly-acquired art; it demands an extraordinarily clear view, great patience, and a specially careful treatment of the organisms to be bred."

Ernst Haeckel,
Natural History of the Universe.



The aim of animal breeding is to produce, from the actual country stock of our domestic animal races, a still more perfected race, by the careful pairing of the parent-animals.

The limit of the desired advance is only determined by the purpose and use of the species in question. Along with this consideration of breeding animals for their usefulness or for their capabilities, the necessity for producing specially representative animals for the further breeding of the race, should also not be forgotten.

When we consider dog-breeding, in the light of what has just been said, it is imperative to produce dogs who, with a more suitable body-build and accordingly greater capacities, shall surpass their ancestors, and shall, further, form an assured guarantee of their

powers of service, with an improvement, if possible, on their inherited qualities and talents.

The breeding of shepherd dogs is the breeding of working dogs; and this must always be the aim, or we shall cease to produce shepherd dogs. The breeding of sheep, which in the heyday of German sheep-breeding some 60—100 years ago tended to foster the breeding of some shepherd dogs to a very high degree, must also remain in the purview of us dog-lovers, because it furnishes the norm of what we use and wish for, which is, hard, fearless, efficient working dogs.

In contradistinction to the utility and the working breeds, there is the breeding of sporting dogs, which indeed procures a temporary advance, but which, however, is always succeeded by deterioration, — I refer to the warning example of the Scottish shepherd dogs and some other races, — for it is not done for the sake of the dog, nor does it tend to make him more useful, but is regulated only in accordance with the vanity of the breeder and the subsequent purchaser. That word "Sport" always means competition for the highest, it is true, but this competition reaches its high-water mark in Exhibitions, which, just because they demand no real capabilities, (as for example in the breeding of race-horses), lead people only too easily astray to lay emphasis entirely on external shape and beauty, instead of on what really mattered, of which I shall speak more particularly in Chapter 5. According to the usually accepted meaning of the word, "Sport" is supposed to exclude business; but to the Englishman, from whom we have taken the word, (although indeed it is an old Germanic word), it has become a business. To the cool-headed and calculating Englishman, it is a fundamental article of his creed that every activity, whether Politics, War, or Sport, in short all, should bring in money. With us too, that word conceals all kinds of obscure and unsavoury things which have nothing to do with genuine Sport. The German breeder therefore should banish this word from his vocabulary and from his thoughts, for at the same time, he has words enough from his own mother-tongue, such as, hobby, recreation, pleasure, comfort, breed, work, competition, rivalry, and to a certain extent, service.

Breeding for sport has further harmful consequences. In order to have any chances of success at Exhibitions, breeding must be effected on a large scale; which can only be done in a regular Kennel. But breeding on a large scale and in a Kennel is the ruin of all sound shepherd dog breeding. I have already spoken at length of the curse of a kennel existence. Kennel breeding, however, doubles and multiplies the evil, and irrevocably spoils all which comes under its influence. We shall hear more about this in what follows. A large number of dogs can only be kept in a Kennel, but in so doing we heap up injury upon injury, because a large collection of shepherd dogs is a contradiction in terms. It is not possible to breed and keep shepherd dogs in herds, because they only become wild and deteriorate. The shepherd dog will only be taken up as a personality; his master

must be able to busy himself with him; especially when he is dealing with a young dog; and that is only possible with one or at the most with a very few, but *never* more. Breeding in quantities must always become a curse to the breeder, because it leads him along the wrong path and deprives him of all real joy in his breeding. Finally, it leads — and this is a further and very real danger for breeder and for the race — to breeding for business considerations only. When it has come to this pass, it has nothing more to do with the dog-lover, or with the utility of the dog-race, and not even with Sport, which indeed has only been too often advanced as a cloak for such practices. When it comes to breeding for business — which is never effected by dealers, at least not by official dealers —, the dog is only a business commodity and nothing more, and is bred and treated as such. There again, we encounter another danger for the race. The dog is no longer bred from the point of view of his services to the race, but only because he has a certain market value. In other words, the direction of the breed is influenced no longer by the experts, but by the buyers. The buyer, however, is mostly an unsuspecting novice, or else one who knows or cares nothing for the weal or the woe of the race as yet. He knows nothing of racial type, nothing of the value of aptitude for work, he often only has an eye for appearances and wishes his dog to be imposing and remarkable, and sometimes even a ruffling swashbuckler.

Dog-breeding must be the work of a dog lover, and cannot be a profession, as is the case with other animals, and a means of acquiring bread and butter. If it once becomes that, then it will be dog-dealing that has nothing more to do with service dog breeding, but on the other hand, more often than not, it will come into conflict with the Law of the land. The work of breeding service dogs must, first and foremost, be the work of dog lovers. Shepherds and hunters breed as dog-lovers, for they only have the exemplary desire to breed efficient and useful dogs. The dog-lover in his breeding aspires after no material and external advantage. He allows himself to be contented with the fact that association with noble, beautiful and gifted creatures, the observation of the phenomena of their lives, and the examination of all that happens in their breeding afford him a whole cycle of pure joys and contentment, and admit him still further into the secrets and the mysteries of Nature. These joys will repay him, (who considers his love for dogs, and who breeds without greed for gain,) for all the sacrifices in money, time and trouble, and even for all failures and disillusionments.

The breeder on a small scale, one who works with one or two bitches, is the most suitable breeder for service dogs because he can care for his breeding animals and their progeny, as is indeed necessary, to such an extent, that he can produce sound, strong animals that can be trained. Whether such a breeder on a small scale, a so-called "little man" have a full purse or no, the basis for his activity must always be the same, that is love for his work, love for the race, and understanding of what constitutes its real welfare. What helps to

contribute to this satisfaction in breeding is the confidence that he will always be able to dispose of the results of his efforts in this direction.

The circles which, up till now, were the best support for dog-lovers are just those who have suffered the most owing to the War. For the future, all our energy must be brought to bear on securing the bare necessities of life; and whether there will be anything over for that which is only a pleasure and never a business, time alone will prove. To preserve this circle of dog-lovers and to maintain the breed should be the most important duty of every Dog-society and of all true friends of the dog; and for every Department of the Government too, which has a clear idea of the civic importance of dog-breeding. This should be a matter to receive most earnest consideration, to which only too little attention has been paid by the Authorities up to the present. The Service dog Movement will effect a great change in this, and, it is hoped, that it will bring it about that the genuine, though up to now somewhat happy-go-lucky, breeding by dog-lovers, will at last be conducted along the right path of service dog breeding, which is of considerable social importance. But here also, breeding must be done from the point of view of the dog-lover and not of the dog dealer, and the disposal of these dogs must be secured in such a way for such breeders that they will be able to steer clear of the Scylla of their old methods and the Charybdis of mere commercialism.

The more we emphasise the social and civic importance of service dog breeding, the better it will be for our race, and the easier it will be for all true friends of the race to keep the dog sound. Service dog breeding will then be pruned of all its excrescences which have grown through indifference, ignorance, vanity, the obsession for "Sport", and a greed for money which is essentially non-Gentile. One of the great mistakes in dog breeding up till now has been this, that in addition to surreptitious breeders for trade and for Sport, there have been also a large number of casual breeders, (called "pseudo-" or "chance-"breeders), who thoughtlessly brought their dogs together and worked hand in glove with them. If we, however, resort to genuine service dog breeding with the right end clearly in view, we shall gain for our purpose a number of serious active breeders. This will be a great advantage for our aims, because the Art and the Science of Breeding must work hand in hand to conduct us to our goal, i. e. to produce a highly efficient and talented dog with a perfect body build.

The Science of Breeding can only profit by such work, because the serious dog-loving breeder, who observes the animal who lives with him in daily intimacy, can furnish a basis for a number of important questions as to breeding and heredity, which, in view of the short period of utero-gestation, the rapidity of growth, and the proportionately early capacity for breeding, have not yet been clearly established. Of course these principles must, if they are to be of any

real value, be based on most minutely exact observations that are verified by the most searching tests. The proper place to record such observations is the Kennel Book, which must be carefully kept by every breeder, and to the contents of which he himself will, later on, often enough find occasion to look for advice and encouragement.

A beginner always lacks the best adviser, which is his own experience, for which many an old breeder had to pay a heavy price. He should therefore take to heart all the warnings which have been given him here in these Chapters with regard to Kennel breeding, "mass-production" breeding etc. They were uttered to save him and our dog trouble and injury. Neither must he start with too great ideas and expectations; on the contrary, he must only keep before his eyes a goal which is reasonably attainable, and in accordance with his means. Not everyone can breed a "Champion", especially not a beginner, neither can every purchaser make use of a Champion.

The high-breeding of our race directed to produce an efficient body with good mental capacity has reached to-day a high level on a broad basis. The physical perfection of the breed at its best, i. e. a powerful, well-knit and well-proportioned working dog's body has, however, not yet been transmitted to the whole race. There are still undoubtedly a large number of dogs in the whole race with excellent talents, capable of development, but with a body-build which leaves room for improvement; and it is a very important task for the future of our breed to seek out these dogs from the masses and to develop their exterior features, while retaining their mental excellencies; which task is thus so much the more profitable, because, among these dogs may be numbered the larger number of sheep-tending dogs. *The dogs that are bred by our shepherds are indeed a fountain of rejuvenation for our race, from which it must satisfy its needs again and again in order to remain vigorous.*

We can compare our shepherd dog breed without exaggeration with the Human Race. Our high-bred stocks correspond in some respects to the "Upper Ten Thousand", (but not the Aristocracy of Money-Bagdom who are like the pet dogs that are no better than drones), to the Aristocracy of Brain, Sword, and Labour. They are an example to be followed and it is their duty to raise the average to a higher level. On the other hand, we have also a shepherd dog "proletariat", — naturally not in the meaning of the word as used to-day in a class-hating sense, — in which must be included all those sickly, unsound dogs, or those who lack the energy to rise from the ruck by their own efforts; further too, those that have deteriorated physically or mentally by breeding, by keeping, by wrong, or over-breeding and by Kennel confinement. It would be labour in vain to try to preserve all these failures for the race. They are the off-scourings of the race, and in most cases cannot even be used as "dung for the race".* Between these two extremes, we have the peasantry

* In the German language this word "Zuchtdünger" is applied to pioneers in a new country, the results of whose labour are only enjoyed by their posterity.

among our dogs, our flock-tending dogs, and also our shepherd dog "Middle-Class". These too we need just as much as Human Society needs their peasantry and Middle Class, for the preservation and the reinvigoration of the species, and for progress. It is just this breed that the greater number of thoughtful dog-lovers should take up for the benefit of the race, and for their own joy and satisfaction.

Beginners often enough come to us with the request for a pair of pups with the idea of "breeding" with them later on. Such "counting the chickens before they are hatched" cannot indeed be called breeding, but simply pairing to produce puppies. In the breeding of human beings we unfortunately take far too little notice, or none at all, of all the circumstances which exercise an influence on the producing of good, healthy and useful descendants, but in the breeding of animals we are bound to do this, because faulty specimens involve, not only the happiness and well-being of people, but — what is very much more important — MONEY!!!

Where, however, can the tyro go for advice and for the necessary fundamental principles of Breeding Knowledge? The born breeder, who recognises with unerring eye what is necessary for his breed, and where his animals are defective and need improvement, is seldom found. We can say this already that he is never found in the town; for he is one who must have passed his life in the country, have consorted with animals, and must have trained his perceptions for them from his earliest years. Next to this, a certain amount of book-learning is necessary. A multitude of articles has been produced on the subject of animal breeding, and if there are only a few of them which deal with dog breeding alone, the thoughtful reader can, notwithstanding, find a great deal of information in discourses on animal breeding in general. To mention only a few there are "Grundlage der Züchtungsbiologie und Allgemeine Tierzucht" (Fundamental Principles of the Biology of Breeding and the General Breeding of Animals) by K. Kronacher, "Biologie und Tierzucht, und Sexualbiologie" (Biology, Animal Breeding and Sexual Biology) by R. Müller; "Die Wissenschaftlichen Grundlagen der Hundezucht" (Scientific Principles of dog-breeding) by R. Schäme; "Geschlechtsleben der Haussäugetiere" (The sexual life of domestic animals) by R. Schmaltz; "Unsere Hunde" (our dogs) by A. Ströfe; "Tierzüchtung" (Animal Breeding) by G. Wilsdorf.

In this connection, we must not overlook the volumes of the "Zuchtbuchs für deutsche Schäferhunde" (SZ) (The Stud Book of the German shepherd dogs), which form the basis for the inevitably necessary investigation by means of the Stud Tables of Information. An ancestral or Stud Table is that which the layman generally, but falsely, calls "the ancestral tree" (genealogical tree). A Genealogical Tree is a one-sided compilation of all the descendants from a breeding animal, which carry his strain, and it may form a necessary compilation with regard to investigations into questions of heredity in the Stud Table. The ancestral or Stud Table, on the other hand, gives a list of all the ancestors of a dog living now, and leads back

by way of parents and grandparents to the more remote family lines, and thus gives us exact information about all the blood strains combined in the dog in question.

The Pedigree Table produced here, — it might just as well be divided horizontally instead of vertically, — is arranged for five family lines or thirty-two ancestors. The number of ancestors appears from the number of the oldest, and most certainly known, series of families which are noted there. If only the parents of an animal are known, then he has only two ancestors; if the grandparents are also known, then he has four, and so on. A Pedigree Table, which is correctly filled up with thirty-two ancestors, contains sixty-two ancestors of the dog. The next, the sixth family line with sixty-four ancestors would already give one hundred and twenty-six. *We shall see later on that the most important thing for the breed is the crossing of the third and fourth family line, that is the great- and the great-great-grandparents.*

Stammtafel.					Auszeichnungen.	
 <p>Rasse: Deutscher Schäferhund Name des Hundes: Geburtsjahr: Mutter: Farbe und Alterschein:</p> <p>Eingetragenes Lehrbuch für Deutsche Schäferhunde Nr. _____ Seite _____</p> <p>Amateuren an:</p> <p>Bestreicher:</p> <p>Amateuren an:</p> <p>Für die Rassebüro verantwortlicher Auszüchter:</p> <p>Vorname _____ Nachname _____</p> <p>Zettel von Stammtafeln für Deutsche Schäferhunde in Druck 2 Auflage</p>						
Eltern	Groß-Eltern	Urgroß-Eltern	Urgroß-Eltern	Ungroß-Eltern		
Väter						
Eltern						
Eltern						
Mutter						
Eltern						
Eltern						

Fig. 302. Pedigree; (Ancestral or Stud Table.)

In the Stud Book, it is true, complete Pedigree Tables are to be found of only a very few dogs; in the greater number of instances, to economise space, the parents and the grand parents only are given. The student of the Stud Book must seek out and copy for himself, the more remote family lines from the previous volumes. This poring over the previous volumes is well compensated for by information gained, and will afford the quickest view of the development of certain individual families and their common relationship, for the beginning is small, easily overlooked, and lack of lucidity increases with the number of breeding years, with the multiplying families, and the diverging branches.

The Lists of Service dogs form a most valuable supplement, when we wish to examine the blood strains in our breed.

We may deduce from these lists the later and appropriate education for service of the dogs which were generally entered in the Stud Book, when they were pups in the nest; that is to say, before there was any possibility of their being trained.

Further information about the outward appearance of the dogs, their manner of working, and incidentally their importance for the breed is given or should be given in the published reports of the judges which appear in the "Zeitung des Vereins für deutsche Schäferhunde", which indeed it must be admitted they do at their own convenience, and somewhat superficially, instead of giving convincing descriptions of causes and effects. These judges' reports contain, in the first place, a more or less detailed discussion of the dog shown; and further, generally too, the reasons for the judges' chosen order of merit. Our chief judges are, by virtue of their frequent activity and their experiences in this direction, in the position also to intersperse their reports with hints about the breeding value of certain dogs and families, their defects and their good qualities, and how to bring up dogs etc., which are especially valuable to the novice. Naturally all these remarks are not found in every judge's report; that would only bore the reader and detract from the value of what had been written. When we think of how our judges, during the season of the most important Dog Shows, devote several days a week and that too, often twice and three times a month in the service of the good cause, we can then be sure that their literary taste alone would prevent their making such continuous repetitions. The breeder must consequently find out for himself from the various reports and Lists of Awards the passages which would be important to him in the judge's reports, and which make it easy enough to follow and trace out the breeding and working successes of individual dogs and their strains.

When the breeding novice has extracted the main facts about individual dogs and their blood strains, their education, and their power to transmit their characteristics, he must then, see dogs for himself and learn to form his own judgments. The best opportunity for this is at Breeding and Stud Shows, and at Field Trials; and when he has visited such Institutions, he must then once more betake himself to working at the Stud Book, and the examination of the judges' reports. He will also glean further information by attending the monthly meetings of the District Branches of the SV at which frequent lectures on breeding and kindred subjects are delivered, and where, above, all, he has opportunity to see other dogs, and can consult with older breeders.

The breeding supervisors of the District Branches are mostly official judges or old breeders; from them the novice will obtain good advice*. Those who would consult them must remember that they give their advice freely and voluntarily, for those who attend in this capacity have also their own business, and it would be unreasonable and indiscreet to take up too much of their time with these con-

* See also "Die Aufgaben der Zuchtwarte und die Pflichten der Züchter (Rüdenhalter und Hündinnenbesitzer)". (The task of the breeding supervisors and the duties of Breeders (dog-keepers and bitch-proprietors.) Supplement 11, to the Rules and Regulations of the SV).

sultations. It would be as well to consider beforehand the questions that are to be asked and to facilitate the answering of them by having means of information available, so that it is possible for the adviser to satisfy all that is required without undue loss of time. If, for example, a novice wishes to have advice about a suitable dog for his bitch, he should mention to the breeding supervisor not only the name and the Stud Book number of the bitch, — in letters sometimes, even this is “forgotten”, — he must do much more, for he should submit a



Fig. 303. "My favourite paper"; Prize photograph in a Competition.

fully written-out Pedigree Table of the bitch, so that the adviser is not put to the trouble of searching out for himself her family blood strain. It is especially useful too if he can produce a similar Pedigree Table of the Rude he has in his mind. By taking such trouble the novice has, at the same time perhaps, already learnt so much that he really scarcely needs the advice in relation to this matter which he required at the time when he began to make his preparations to obtain the above-mentioned help. He should at least bring the bitch to the

breeding supervisor for inspection, because no advice can be given in the choice of parents without a knowledge of the blood-strain, the working achievements, and the external features of the proposed breeding partner. If this is not feasible, he must certainly bring a good photograph, and, if possible, pictures and descriptions of the Rude which he has in view, or he should say where such are to be obtained.

After such a thorough preparation, it will be clear to the novice that it is far more than a question of breeding later on with a pair of pups, which he may have already procured. Every dog is not suitable for every bitch, even as, for other reasons, every man is not a mate for every woman. One can be a breeder without keeping a "loving couple", and indeed the owner of a stud dog is often enough compelled to seek a mate for his bitches outside the existing strain which he has in the Kennel. Before we now turn to the details of the Science of Breeding, we must thoroughly understand that *Breeding can only give the foundations for good body-build and high efficiency, while for the perfection of the body and for usefulness in vocation, bringing up, keeping, and training are responsible*. Where these are wanting, we can blame neither the breeder, nor the parents of the dog.

Let us now consider first the general processes of procreation and their consequences. Every living being possesses naturally the instinct to preserve itself and its species. This instinct of self-preservation is the real basis for the conservation of the species by reproduction. This reproduction, with the higher animals, is the task of the germ cell. There are, speaking only of the mammals, the spermatozoa secreted in the testicles of the male, and the ova formed in the female, both of which are invisible to the naked eye. Spermatozoa and ova are each an animal cell consisting of a nucleus and a body, and the union of both is necessary to generate a new life. At certain times, which generally have their exterior signs and are called "periods of heat", the envelopes of the ripened ova burst in the ovary of the female, and these ova, thus liberated from the ovaries, slowly pass through the oval ducts to the womb, which in the case of a bitch, as in other families, will no doubt take several days. During that passage, the fertilisation of the ova by a spermatozoon must take place, as the liberated, but still unfertilised, ovum, and also the spermatozoon, which has not united with this ovum, have only a short period of living activity within the female body. The spermatozoa, by copulation, pass in many thousands into the vagina with the semen of the male animal and insinuate themselves on to the mucous membrane by the motion of their tails, and are assisted by a suction of the vagina, womb and the oval ducts, up to the ovaries*. This latter motion is probably still more intensified by the chemical reaction which occurs between the spermatozoa and the ova. With regard to the rapidity of the motion of the spermatozoa, information varies between 0.05 and 0.15 and 3.6 mm per second. They have been found

* According to Graf Spee, 60,000 spermatozoa are contained in one ccm. of semen; and according to Loch, there are from 226—550,000,000 of them in one emission. The Author.

in bitches, six hours after copulation, in the womb near the opening of the oval duct, and in the ovary after twenty hours. Unfertilised eggs, which pass into the womb will perish there. It has not yet been completely proved how long spermatozoa remain living and active in the female; but in cases where they were able to derive sustenance from the mucous membrane, they have been found living after several days, which, however, does not mean that they were also capable of fertilisation. It is therefore taken for granted that this capability for fertilisation, at least in the dog family, ceases after twenty-four hours.

Every oval cell is fertilised by one single spermatozoon only. When passing into the oval cell, it loses its tail end and only the male cell nucleus enters the oval cell, which immediately afterwards closes itself to prevent the entrance of any more spermatozoa. The consequent fertilisation is the coalescence of the two nuclei of the male and the female cells. From this it is obvious that these nuclei must be the bearers of the transmittable characteristics of the male and the female, for every animal generated by copulation unites in itself the qualities of both parents. The possibilities of such union will be shown later in the Laws of Heredity. The oval cell then divides itself, according to the strict working of Laws, (which operate in the same way in all departments of life), until at last it forms a hollow ball, in which the embryo itself swims about in the fertilising liquid which contains albumen, drawn from the body of the mother. This germ-vesicle then forms different coatings, the outermost of which grows to become intimately united with the body of the mother in the placenta; and thus the growing embryo is nourished from the blood of the mother. This is effected by means of a kind of perspiration or osmosis of the nourishing and secreting substances between the choria and the coating of the womb. There is no such thing as a direct union of blood. As soon as the embryo is ripe for birth, it is brought into the world by means of the contraction of the muscles of the womb and the belly, after the coverings have first burst, and the waters of parturition have lubricated the vagina. The biting off of the umbilical cord then finishes the process of birth, and another new life thus becomes independent.

The Science of Animal Breeding seeks to influence the natural process of coming to life in order to breed, from specially selected parent-animals, a progeny specially adapted to, and specially apt for its particular purposes, and descendants in which the good qualities of the parents are developed to the highest degree, while the faults are eliminated.

I have already explained the general idea of "Race" when speaking of the domestic animals. "Race", according to H. v. Nathusius does not imply the idea of immutability, and this is easily observed in the evolution of our present-day dog races. Animal breeding draws a distinction between "natural" races, "intermediate races", and "high-bred" races, or races which have been elevated by artificial breeding*. The "natural" race of our present-day shepherd

* "natural", as applied to a race in this sense, means a race with whose normal course of evolution there has been no interference.

dog would be the C. Poutiatini, and the somewhat later dog of the Bronze Age who, however, already became an "intermediate" race wherever, by keeping or breeding, a certain improvement could be observed. As we have seen, the shepherd dog has remained on the same plane in some countries, wherever he has not been developed by breeding for efficiency to become a high-bred race. Uniformity of racial type in a very large area is impossible, because, even without the influence of breeding and training for work, the altitude of the country, the weather conditions and nature of the country, as well as the nourishment available, will always exercise an influence on animals who are continually living or being bred in such places. These conditions alone effect the race, for, in spite of their general basic harmony, the shepherd dogs of the different European countries show some small deviations from each other. This is the origin of local stocks, out of which, by means of crossing, a breed was evolved, from which we have been able to establish a most clearly defined goal, i. e. the highest efficiency combined with the most perfect and suitable working body build. In animal breeding then, we shall find, in the same race, different branches, breeds and families. In our own line, the first named correspond to breeding stocks which differ very little in their blood strain, while breeds and families mean the same thing in dog breeding.

Animal breeding can employ two methods to attain its end, crossing, and also guarding the breed from mongrel influences. Neither of these are cast-iron ideas, for, notwithstanding that in general when speaking of dog breeding, cross-breeding means the union of two parents of different races, — (as for instance, a shepherd dog with a Dobermann bitch or vice versa), — while "pure breeding" demands that every union shall be within the same race, it is yet obvious that, in the true sense of the word, every copulation within the blood strain is "pure-breeding", while every infusion of "foreign" blood, even from the same race should be described as "cross-breeding". So far as the breeding of our shepherd dog for service is concerned, this idea of pure breeding should not be carried too far, lest it become in-breeding on a large scale, but we should use the word "pure-breeding", as a rule, for the production of animals of the same stock.

Cross breedings with other shepherd dog families have often occurred in the frontier districts, and will continue to do so, just as was, and is the case between shepherd dogs and Old-German shepherd dogs. These unions have no bearing on the aims of the breeder, but they generally do no real harm, which, however, might be the case if shepherd dogs were to be cross-bred with dogs of another race. No breeder will intentionally countenance such crossings, but they may occur often enough willy nilly. Neither the dog nor the bitch will, when the moment arrives, waste much time over enquiries about the place of the other partner in Burke's Peerage, nor the quarterings on the family shield. Such wild crossings may, however, be very harmful, for, often, enough, the result will not always bear the hallmarks

of such a democratic taste in love, but will appear to be a genuine and real shepherd dog who, in body-build and expression, will afford us no inkling of his mixed descent. Neither is the erect ear, so dear to the lay dog-lover, an infallible guarantee of purity, because every breeder and rearer knows that not all shepherd dogs, in spite of the fondest hopes, develop erect ears, but sometimes will have them turning over at the tips, or even altogether pendulous. Such is the power of the original and ancient shepherd dog blood, when mixed with that of younger and weaker dog races, that in the first generation, it stamps the descendants so completely in their external features that even a careful expert cannot detect the difference by means of a superficial examination, (if he is not helped by the colour of the coat), by which he can assert or deny the purity of the dog in question. The infusion of foreign blood will only manifest itself in accordance with the rules of breeding established by Mendel, (of which we shall speak further later on), i. e. in the second, or third, and occasionally in a later generation. Hence the great risk in breeding from animals of unknown descent, against which we can never take too many precautions. It must be left entirely to the old, well-experienced breeder to decide whether such dogs can be bred from, if by reason of their qualities or efficiency they appear to be of great value. These old breeders must be recognised as authorities on what is desirable in the breed, because they are thoroughly well-acquainted with the question in all its bearings, and they must be so well situated financially and so strong minded, — which is the principle thing, — that they will allow no failure to disturb them, and will never permit bad results to make a public appearance, either from carelessness or from business motives.

When we, as frequently happens, and which should still more frequently be the case, wish to produce efficient dogs, especially Rude of the very best high breed, — and no insignificant Kennel curs, — to perfect the working dog stocks, even this, where blood relation is not in question, is cross-breeding in the strict sense of the word; just as vice versa, when working dog blood is infused into old high-bred stock for the purposes of invigoration. In such cases we are acting in much the same way as in horse-breeding when mixing "full-blood" with "country blood". According to the ideas of pure breeding, the horse-breeder speaks of 63/64 full blood as re-confirmed full blood after the sixth generation, and of absolutely pure blood after the eighth generation with 255/256 pure blood, if nothing else but full blood is infused. Such nicety of calculation is not possible, nor necessary in the breeding of our shepherd dog, because even our high-breeds do not contain pure blood in this sense of the word, while the country breeds have the same good blood to a greater extent. In order to perfect the body build of a working breed, it is best to pair efficient bitches of such breed with a dog of correspondingly good body build. Of the progeny thus obtained, only the bitch pups must be kept, and as soon as they are ready for breeding, they should be infused again with the blood of a suitable dog, related on the

father's side. If we act of set purpose in this way for a further two or three generations, the breed will then be sufficiently fixed and harmonised. It is, of course, obvious that such breeding bitches must remain working with the flocks. In cases where we wish to invigorate the efficiency qualities of one of our breeds by means of working dog blood, we do it in a similar way, and one most suitable for our purpose, by means of bitches. It is obvious of course that no bitches are used that have become unfit for service, or that are away from the flocks, the progeny of which are again to be employed in real work with flocks or in any other service. Such blood invigoration may be necessary where, by faulty keeping and up-bringing, the development and the qualities of the dog have deteriorated, or when mistakes have been made in training. According to Müller, inbreeding following blood invigoration is able to develop latent talents and to enhance the possibility of their development.

Pure breeding leads automatically to in-breeding which, as I have already hinted, is nothing else but strictly maintained pure breeding. In-breeding too is not a hard and fast idea, if, in the wider sense of the word, it corresponds to pure breeding, for it becomes relation breeding by way of family breeding and finds its most intensified expression in incestuous breeding. Family breeding in our shepherd dog breeding will correspond, for instance, to breeding between dogs of the Horand strain; "relation" breeding, in the wider or narrower sense of the word, would be the pairing of animals of the same blood-related stocks and breeds; "incestuous" breeding is finally the in-, or relation-breeding between parents and children, grandparents and grandchildren, and between real brothers and sisters. When speaking of real sisters and brothers, we mean descendants from the same parents who, however, were born in different litters of pups, while the word "litter relation" indicates an intensification of the meaning. "Half-relations" have only one common parent, either the father or the mother. The Royal Equerry Graf Lehndorff, the well-known authority on the breeding of thoroughbred horses, speaks of "in-breeding", when there are less than four lines of families between the parents and their common ancestor; in other cases, he speaks of "modified relation breeding". In general we shall adhere to these terms. We must still mention "intermediate breeding" by which it is sought to avoid the harm done by inbreeding through pairing with nearly related strains, (which do not come from the same but from different litters), and which have grown up under different conditions of life. With regard to dogs, this is the most frequent kind of inbreeding which takes place. In the so-called "breeding of lines", the breeding couple are chosen from the same line of origin and every dog not belonging to that line is excluded. This strengthens the power of the strain considerably, and, if intelligently carried out, leads to certain success by fixing the required qualities and by perfecting and ennobling the stock. If, however, this care is not observed and the choice of breeding animals is only made in a general way with regard to the strain and Pedigree Table, without regard] to the indi-

vidual qualities of the chosen pair, such pure line breeding can spoil the whole stock rapidly and entirely; and our new shepherd dog breeding furnishes examples of this.

Generally, many things are said against inbreeding; laymen and breeding novices usually declare it to be harmful and unpermissible, which, however, only proves their lack of judgment, which is caused by their failure to grasp the idea, and this too because they think from the purely human point of view which is greatly influenced by the moral ideals of the Mosaic Legal Code, and by Law which punishes incest, and this only, which is not the sole form of inbreeding. The general diffusion of this idea of right and wrong must be traced back to the already prehistoric custom, which made exogamy (marrying outside the family) compulsory, which again was a consequence of the former custom of polygamy practised nearly over the whole of the inhabited world. On the other hand, some highly developed people not only allowed marriages between sisters and brothers, but in certain cases commanded it. Inbreeding in a wider sense was also the cause of the rise of the old historic dwellers in the mountainous countries. They all came into history with a Caste which confined its marriages severely to its own circle. Later on in history also, and even to-day, progress and success are only due to this, in spite of all idle talk of equality. *Leaders and all those who have been looked up to as paragons have always sprung from carefully confined and limited breeding, and never from the gutter.*

With animals living at liberty, we find family and relation breeding everywhere, and there is no doubt that incestuous breeding was by no means a rare occurrence, and still less so in the case of animals who herded together; this was also seen again in species that lived singly and alone, who mostly confined themselves to narrow limits, the result being that unions between blood relations occurred more often than not. The origin of such species and the formation and separation of the various races can be attributed to the results of inbreeding, among other causes, nay, every life began with inbreeding, which formed the foundation of all subsequent development.

The oft repeated assertion that inbreeding is harmful must consequently be also true with animals, which, however, cannot be shown. We see such harmful consequences, on the contrary, when the natural conditions of existence are influenced by human interference with wild animals, which are confined to certain areas, no matter whether this interference be exercised in a lesser degree than in the case of domestic animals or not. *This leads us on the right road and shows us that the so-called evils of inbreeding are by no means the consequences of inbreeding, but only of keeping. Not inbreeding but upbringing and keeping that are contrary to Nature are the causes of many a bitter disappointment in animal breeding; as, for example, settling an animal in surroundings to which it is not naturally accustomed, keeping under conditions that are unfavourable to the development of the physical and mental qualities, wrong nourishment, the exclusion of the struggle for existence, which weeds out the unworthy,*

the rearing of the sick and the weaklings, and their use for breeding purposes. All these statements should beat with the force of trip-hammers upon the conscience of breeders that are careless, or do not keep their aims concentrated on the welfare of the race.

Inbreeding, when properly applied, does not result in refining the race out of existence, in eradicating the male proclivities and instilling in their place those of the female, in decrease in vital power and the capacity to breed, nor in the loss of the good characteristics in exchange for over-sensitiveness, nervousness, and shyness. All this indeed is true in the case of breeding with dogs kept in a Kennel, who, instead of coming out, and working, and being obliged to exert themselves mentally and physically, must become depraved in the Kennel, in order that they may earn a bubble reputation and money for their keeper. It is not the fault of the shepherd dog when he is susceptible to illness and distemper; it is the result of Kennel breeding. It permitted many pups to survive who ought to have been killed, and it allowed to be used for breeding, even weaklings in immature youth, who had been carefully brought up by hand, and who were seriously ill. *Where such breeding took place, there was absolutely no regard for the breed, and none for the purchaser. For such a man and the likes of him we can have nothing but reproach; he is responsible for the deterioration of some breeds and for the loss of the true shepherd dog nature in his animals; he is responsible, and not this breeding, in which careful and thoughtful breeders have succeeded, just as Nature has.*

Further, in addition to these supposed dangers, inbreeding has a very real peril, of which I will shortly speak, after once more enlarging on its advantages. *Inbreeding secures for a valuable strain the highest influences on the breed; it strengthens the development and the inheritability of characteristics, and, in consequence, makes the introduction and the consolidation of new characteristics possible, and increases the chances of the survival of the breed, as compared with others.* The danger, which I have already mentioned in the strengthening of the characteristics through inbreeding, lies in the fact that, in this process, not only the desired characteristics, but also those that are undesirable, are strengthened and consolidated. There is also a further reason for avoiding inbreeding under all circumstances with dogs who are confined to a Kennel, because kennel-bred and kennel-kept animals are liable to develop the beginnings of undesirable qualities, especially weakness, effeminacy, liability to illness; and where these beginnings are apparent, they will be strengthened when such animals are paired, and their progeny will certainly degenerate. This is chiefly true with nervous debility and other nervous diseases in which the effects of inbreeding are especially to be observed.

Another bad consequence of too intense an inbreeding, or rather of incestuous inbreeding, is said to be that the dogs will develop an inclination to become too large, their bones will become clumsy and lose their necessary hardness, while the bitches on the other hand,

may become too slender-boned. It is obvious that such results of over breeding must be carefully observed, and that animals with these faults must be absolutely excluded from breeding.

Exact knowledge, careful selection and suitable keeping of the breeding couple, an acute observation, and, if necessary, extermination of the results of such breeding are the sine quâ non for successful inbreeding. If all these are carefully observed, it will not lead to overbreeding and degeneration, but to success. Unfortunately, in dog breeding, it is generally impossible to observe the progeny properly. For reasons already mentioned, which I shall bring forward again at greater length, the breeder cannot keep and bring up litters to an age, when he will be able to judge them with any degree of certainty; and he will in all probability only see a very few of those, of which he was obliged to dispose when young, after they are fully grown. Here lies a certain danger from careless and exaggerated inbreeding. Another danger is to be found in the lack of proper knowledge and experience of many breeders, and there is an even greater danger in the absolute ignorance of the majority of buyers who will fall victims to the fascinations of exterior beauty, of size, and the lure of prizewinning, and will become hypnotised at the mention of some names in the Breeding Tables, just as easily as flies to the proverbial pot of jam. The chiefest and greatest danger, however, consists in the activities of unscrupulous and careless breeders who might, in their eagerness for exterior features and ambition for the success of their breed at Exhibitions, entirely destroy a large part of the race by overbreeding, for what has once become degenerate is indeed a hopeless case. Unfortunately the race itself with its real friends will have to bear the consequences.

The more intense the inbreeding the greater the danger. A pair of full-, half- and litter-brothers and sisters is the most objectionable. After this, there is the pairing between uncle and niece, or vice versa, while the pairing between father and daughter, or son and mother may, under favourable circumstances, be very effective for the speedy consolidation of certain good qualities. The best results are, however, according to Graf Lehndorff, obtained by inbreeding with descendants of the fourth generation from a common ancestor, that is to say, of great-great-grandchildren.

The best example of the value of inbreeding is the breeding of English thorough-bred horses; which is based on a few strains only. Thanks to favourable conditions of keeping, of air and soil, and thanks too, to the purse of the breeder, it has produced horses of the very best quality, with iron nerves and perfect constitutions. It is now very instructive to know that, here too, a deterioration is perceptible as soon as the local and keeping conditions are changed and deviate from the natural circumstances. Thus, in a stud, an obvious retrogression of the efficiency and the fertility of the horses was observed, when the owner, through over-carefulness, after losses he had sustained in the open pasture, confined his animals to the stables, or to a special paddock. Our experiences in the breeding of shepherd

dogs incline us to inbreeding, but it seems to me that in the last few years, too much has been very thoughtlessly done in this respect, and that inbreeding has been accompanied by unnatural conditions of keeping in kennels, which resulted in lack of sufficient exercise and work. From these conditions then we can already see the phenomena of over-breeding in a few stocks, such as an over refined head, a bitch-like exterior, abnormal size and weight of bones, a tendency of the coat to fade, nervous debility and shyness. All this is a very serious warning that we should call a halt, and take the precaution to infuse with new working dog blood, and to create more suitable conditions of life for our dogs.

In the afore-mentioned processes of division in the oval cell, the united nuclei of the spermatozoa, which are the bearers of the male and the female inheritable substances, have likewise split up those inheritances and have mixed them up, the one with the other, although in a manner strictly in accordance with the Laws of Nature. This affords an explanation for the difference so often observed in the young of the same parents; but they also fill us with the desire to know more exactly the phenomena of inheritance. If we are able to speak at first of a retaining progressive inheritance which strengthened the characteristics, and of an atrophying and retrograde inheritance which effaces the different characteristics, the question becomes still more complicated, when we wish to know more of what has been inherited from each parent. Generally speaking, we have now arrived at the following four Laws of inheritance, the Mosaic inheritance, the inheritance by blending, the inheritance by new creation and, most important of all, the inheritance by Mendel's Law of divergence. The experiences in the working of these Laws are gained by crossings, but we must not forget that the idea of crossing, as above explained, can be extended to include many things. It is at once plain what we must understand by the Mosaic Law of inheritance, when we translate this foreign word by the German word "Kunterbunt" (pell-mell); the characteristics of both parents are thus found in the offspring side by side. When we speak of inheritance by blending, on the contrary, we mean that these characteristics have become indistinct; while, by new created characteristics, we mean animals with characteristics which have not been manifest in the parents. The Law of divergence or Mendel's Law, — so called after the discoverer, the Augustinian Father in Brünn, — lays it down that in the various generations there is a division of the parental characteristics according to different fixed rules, and that there are predominating characteristics which come to the fore as opposed to other latent characteristics. These statements are doubtless very important and instructive. With our present knowledge, however, these are scarcely worth considering in animal breeding, and have only a very partial value for our shepherd dog breeding; for the law of Mendel has not yet been proved to hold good for such important qualities as growth, precociousness, physical strength, sensitiveness or character. It has been established for some exterior features without any real import-

tance for our breed as, for example, the colour of the whole body, or of some parts or of the coat, but it has not been generally established for the other important physical and mental characteristics. The Laws of Mendel are valuable therefore when applied generally to wholesale productions, especially the cultivation of plants and the breeding of small animals. Our dog breeding, however, is detail and individual work accomplished by the mind; it is an art as compared to mass-production; at least, that is what it should be in the ideal.

There is, however, one case in which the Law of Mendel might be of great importance; i. e. in a mongrel breed. As already explained, the power of the shepherd dog blood in such mongrel connections is so great that in the descendants of these wild cross-breed matings, (where the father or the mother belong to the shepherd dog race,) the impure blood cannot be detected in the first generation, and such descendants are often considered to be shepherd dogs of a pure race. In such cases, according to the Law of Mendel, a throw-back into the other strain might be expected only in the second or following generations, unless newly infused shepherd dog blood should obliterate the mongrel taint by its preponderating strength. I wish to remark here, with regard to what preceeded and what follows, that by "characteristics" we understand the physical as well as the mental qualities i. e. not only the exterior and interior construction of the whole body, but also the senses, the talents, health, liabilities to illness as well as maimings.

With regard to the just mentioned detail work, we must look out for other Laws, and for that purpose turn back again to the bearers of the substance of inheritance in the germ plasm of the sexual cells. These minute inheritance bearers, inheritance unities, or inheritance foundations transmit the qualities of the parents to the descendants, naturally not in such a way that father and mother always give the same quality of germ plasm, or germ plasm of the same quality, to the substance of inheritance. Which part shall prevail depends on the individual potency of the respective parents. *This individual power of heredity of the single animal is assisted by the hereditary power, or constancy of heredity of the race, or of the blood, which is called "constancy".* This doctrine of the power of the transmission of the blood, by which we understand the sure hereditary transmission of the qualities of the race to its descendants, and their power of transmitting them again to their progeny is older. It bases its selection for breeding on the Pedigree Table.

When carried through of set purpose, this constancy of inheritance reaches the "Consummation", i. e. the most pronounced development and perfection of certain characteristics, and can thus lead to a most undesirable over-breeding from the point view of the breeder. Undesirable, because a general weakness of the respective progeny may be the result of over-breeding, which, in addition, can give occasion for the appearance of faculties, hitherto latent, which are by no means desired. Our shepherd dog breed is a striking example of the hereditary power of the blood, which in the space of a few years only has produced a

uniform and genuinely transmitting breed from certain foundation forms so diverse in external appearance.

A somewhat more recent doctrine of the inheritable power of individual animals is derived from the experiences gained with regard to the tendency, which is not found in all, but in this particular animal, to transmit its own characteristics. This doctrine, however, had a sure support in the above explained constancy of inheritance of the blood, of which the individual animal is the bearer. A very instructive confirmation of the penetrating power and the permanent efficiency of a certain individual is given in a short report which appeared in the Press, in a article on the conclusions that might be drawn from the investigations of human ancestry. In the article, it was shown that a considerable proportion of all the famous scholars and artists, in Swabia and Baden in the last century, could trace back in their Family Table to a keen-witted and extraordinarily gifted woman as their common ancestress, who lived in the South West corner in the 17th century.

It is of great importance to breeding to realise the conclusion which may be drawn from what has gone before, which is, that the mating of a breeding pair must be made not only after consulting the Pedigree Table, but also after taking into consideration the breeding value of the proposed partners. This leads us back to the question of Relation- and In-breeding, because the power of the inheritance of the individual animal finds its best support in the blood.

As the breeding value of an animal is not apparent from a cursory glance, but must, on the contrary be proved from its progeny, the harmony in a litter would speak in favour of the breeding value and of the suitable blood strain of both parents, in which, however, the different effects of keeping, on their further development must not be overlooked. Generally speaking, we may consider an animal coming from such a litter as of higher value for the breed, (provided that its mating partner always has suitable blood), than an individual animal, (no matter how pleasing its exterior), which stands high above the average of his other sisters and brothers. We must, on the contrary, suppose that such a dog will only be an unreliable transmitter. This, however, does not exclude the possibility that in further breeding of a set purpose by him and his blood, a gradual consolidation of his good qualities may occur, and thus a guarantee of his reliable powers of inheritance may be secured.

Further, in this connection, there are still other phenomena of transmission to be considered. We have, accordingly, next, the interrupted transmission which is manifested in this, that the progeny do not bear such a striking resemblance to their parents, nor even to one of them, as to the grandparents, or to some other more remote ancestor. This particular form of inheritance can lead to a "throw-back", which is not desired in the breed. Phenomena of "throw-back" are said to be most frequently observed when alien blood is introduced into the breed from the male side. In such cases, all possible com-

binations of inheritance would come into operation, if not counteracted by the transmission of inheritance-bearing groups.

Phenomena of throw backs show themselves, however, also when domestic animals become wild again. Neglect and being kept in a kennel drive our dogs to become mentally wild again, and this explains the loss of valuable mental qualities in animals thus bred. A throw back to a remote ancestral form is called "Atavism", the reappearance of the atrophied fifth toe on the hind legs of our domestic dogs is a case in point.

We find further, the particular sexual inheritance which consists in each sex transmitting to the progeny of the same sex the particular hallmarks of its sex. The dog transmits to the dog the more powerful build, the stronger bite, the beginnings of a mane; and the bitch on the other hand, gives to her daughters more gracefulness and a finer form. A deviation from this rule is seen when the dog has a more bitch-like form, and the bitches appear like dogs; this indicates serious disturbances which would render such animals unsuitable for breeding.

Differing from this transmission of the hall-marks of sex, and entirely harmless, is the often observed and so-called "over-cross" transmission, which occurs when dogs resemble their mother, and bitches take after their father. In breeding, this occurrence is turned to good purpose, for the rapid perfection of the different stocks.

We now come to the inheritability of acquired qualities, a subject on which there has always been much divided opinion among noted scholars. To-day, however, there are so many thoroughly tested observations and proofs in favour of such transmission that the possibility can no longer be a matter of doubt. The most frequently heard objection of laymen is, perhaps, that the docked ears and tails in the races among which docking is practised are not transmittable. Such docking, however, is, first of all, no acquired quality but a maiming, which, on the other hand, does not effect parts important to life, but are of an absolutely subordinate nature. Moreover, the custom of docking has been practised only for a comparatively short time. In spite of this, we find cases where a stumpy tail has been transmitted in races where such docking had been practised for a very long time, although this was by no means the rule. Such was the case with some races connected with shepherd dog stock.

The best proof of the transmission and consolidation of acquired mental gifts and qualities, — I wish to refer to what I said in the 2nd Chapter about this, — is afforded to us shepherd dog lovers by our dog's development from the wild dog to the dog working with the flocks, and in public service. Unfortunately, however, not only the good qualities, but also those that are undesirable will be inherited and confirmed, among which we may specially mention effeminacy of physical as well as of mental traits, which is a very unsatisfactory power of heredity. This inner-effeminacy is already the beginning of a mental disease, and unhappily such diseases or rather, the tendency to them are inheritable. For instance, dogs

weakened by distemper will, if used for breeding, transmit to their progeny the liability to this disease and a reduced power of resistance against it. Serious distemper, however, is specially harmful to the nerves, and nervous debility again is the cause of shyness. Now one cannot always judge an animal exteriorly with regard to his inherited tendencies, for he can also be the bearer of latent tendencies to disease which are likely to be inherited, according to the Law of Mendel. In cases then of breeding, where two such apparently sound bearers of latent tendencies mate together, the transmission of these tendencies to their descendants is almost a certainty. *Hence the strict necessity for choosing animals for breeding purposes from hardy stock that has preserved its health by work and has not been handicapped by disease, or shyness caused by kennel keeping.*

We have now arrived at the question of how to select the breeding pair, what has to be considered in this connection, and what are the duties of each partner. *We cannot tell from the exterior what value a dog has for breeding purposes, either from his expression, his body-build, or from his achievements. All this lies hidden, as Herr Wilsdorf says, in the germ plasm. The Pedigree Table can give us some information about it, but the descendants of the dog in question, and those of his ancestors must confirm it.* There is nothing perfect under the sun, but we must do our best to find breeding partners as little hampered with faults as possible, — faultless in build, and inner qualities, and as highly talented, as may be, — whose blood affords us a guarantee of the animal's value for breeding, and that it will furnish the necessary complement to the qualities of the other partner.

The Stud Book and the List of working dogs give us the best information of the blood strains, the talents for, and achievements in work, as well as about their age. The breeding animal must be fully developed and ripe, in order that we may be sure that a vigorous progeny will be bred, begotten, carried, and born. A dog is only fully developed after the end of the second year; the bitch a little earlier, but she should never be used for breeding purposes before she is twenty months old. It is true that dogs and bitches are willing and capable of breeding at an earlier age, but to use them for breeding before the proper age is to do so at the expense of both progeny and parents. A breeder who works with young animals, sins against the future of the race, and is guilty of unfair treatment of those who buy the pups, and of those who purchase the parents later on, for such people are cute enough to discard these animals whose powers they have prematurely used up, before it is too late to sell them. Young parents beget few children, and those that are born are weak at that, while parents, who are not developed in mental qualities, can produce no progeny of any real worth from the mental point of view. The age of the mother has a great influence in this respect, for she must carry and suckle the offspring. The future of a bitch who becomes a mother too soon is ruined, because the muscles, which are still weak, are not able to carry such a load; the firm structure of the fore-quarters is lost,

and also the strength of the back. The period of fertility will be curtailed and her development and growth will be impeded. The same holds true for a dog who is prematurely used for breeding; his potency, breeding capacity, and breeding value disappear much sooner than in one who has been treated carefully in his youth. The spoilt gait and the consequent impairing of the powers of endurance of such a ruined stud dog will be apparent from the strained muscles which are the result of being used too early for breeding purposes. Great care must be taken of breeding animals in their youth, but to allow them to work till the period of puberty arrives is a preparatory condition for good and sound descendants.

Capacity for breeding decreases with age; it lasts in proportion as the animal was not abused when young; the more wisely and the more suitably it is looked after, the more powerful does it remain. As its capacity for breeding wanes, so the vigour of its progeny decreases. This can be compensated, to a certain extent, by pairing a strong young bitch with a valuable dog that is growing old and vice versa, by bringing a young dog suitable for breeding to an old bitch. It can be laid down as a general rule that dogs who were not used for breeding till they had attained their full puberty, that is until the end of the second year, will retain their breeding power for five years and even longer.

We will now proceed to examine the body-build and the characteristics of the breeding pair. In the first place, both must show the pure and suitable exterior characteristics of their sex, "true male and female features" without any obliteration, or traces of transition to the opposite sex. In this connection it is very important to pay careful attention because all the characteristics and phenomena of life are in intimate correlation. The pronounced sexual characteristics allow us therefore to conclude that the sexual cells are vigorously developed.

Let us now consider these animals from the point of view of health and constitution. A breeding animal must be thoroughly healthy, hard, and wiry. We can judge of the state of health and vigour from the eyes, the glossiness of the coat, the condition of the hair, and the whole bearing of the dog. We can also judge by the hardness of the appearance of the condition of the bones which must not be coarse and spongy, for the hollow cylindrical bones must be comparatively thin, but firm in structure, strengthened at the joints. Further, these joints must be well-knit and the muscles fully-developed and hard. Under no circumstances must breeding animals be fat; an overabundance of adipose tissue would spoil the development of the sexual cells. I have already drawn attention to the fact that it is dangerous to the welfare of the breed to use animals that have suffered from a severe attack of distemper, especially from nerve distemper. They are as useless for the breed as are animals with cerebral affections and epilepsy.

Perfect physical development we call nobility; this does not mean external beauty of the form, but the suitability of the body-

build for service, and this is a result of high-breeding, and the precocity aimed at, which retains the nobility of the youthful form. On this account, precocity is an ideal to be striven for by the breeder, also too, because it allows of an earlier perfection and employment in service; but not an earlier use for breeding purposes. Animals who exhibit the symptoms of over-breeding are useless for breeding.

The two breeding partners should also match in size; though it is obvious that the dog must be larger and more powerful. The most suitable size for service dogs is, as will be shown in Chapter 5, something between 21" and 25"; for bitches it should be between 21" to 23" for dogs from 22½" to 25". I will describe in Chapter 5 how these measurements are to be taken. Generally speaking, people make as many mistakes in measuring their dog, as in breeding for size. Just as a small child wishes to be taller than it really is, so, many people believe, that their dog gains in value when he is "very large". They are often supported in their foolishness by the folly of many buyers who wish to have, not a shepherd dog, but a very Cerberus, and who imagine that such a giant dog could retain the shape and the nature of a shepherd dog. Every form in life has its distinct and natural limits within which it may lawfully develop. If it should transgress these limits so as to exceed, or come short of them, it degenerates, cuts itself off from the competition for the survival of the fittest, and must go under. The objections to unnatural size in the shepherd dog will be explained at length in Chapter 5; it can, as we have already seen, be the result of overbreeding, and at all times it is the result of wrong breeding for size at all costs, instead of for the size suitable to the shepherd dog. It can sometimes result in a proportionate size, but it is always an undesirable form; and the result of such breeding must often fall entirely short of the beau ideal of a dog with a good elongated well-set, well-proportioned body, and give us instead a stork-like, short backed, and therefore a too high, perpendicular and spindle-legged animal. Such unusual dogs are mostly the result of parents who did not suit each other from the point of view of size, whose barely visible faults of body-build developed into a caricature in the offspring. I would like to say here, as an urgent warning for shepherd dog breeders, that in other breeds of animals also, as experience teaches, those who were either heavier or higher in the leg than was natural to the racial type, have proved themselves unreliable outsiders for breeding purposes.

Sexual maiming (cutting and castration), in addition to physical and mental damage, leads to overgrowth, because the ossification of the cartilaginous ingredients of the skeleton in such animals begins at a later age. This occurs especially in the leg bones, and here too most usually in the hindquarters, while on the other hand, the growth of the cranium is reduced. Therefore, as we shall see, the existence and the efficiency of the sexual glands exercises an influence on the natural, physical, and also mental development, and it can be imagined that the just mentioned insufficient power of transmission

of the larger animals has some relation to the weakening of the sexual glands, be it through over-breeding, wrong keeping, illness, or through other causes which may have been the reason for the sickly and exaggerated growth of those animals themselves. The dwarfing of the cranium could not but have some effect on the contents of the skull; for we already speak of "stupid giants". We may also in this connection think of the over-developed hind-quarters in dogs of "the very latest breeding" which compels them to adopt an exaggerated position of the hind-quarters, — the Fifth Chapter will give us more information about this, — and we can easily picture the specially "noble" or "fine" true bitch-like head of such dogs which are often found.

It goes without saying that just as with overgrown dogs, so too we dare not breed from undersized, unsociable, weak-bodied whipper-snappers. They are the result of being half-starved while being brought up, — often too while in the womb of the mother, —, of starvation and lack of nourishment later on, and of illness, while in the case of bitches, it is partly the result of over-breeding, or from the premature birth of their young.

The hall marks of the race, as explained in Chapter 5, will give further information about the quality of the various parts of the body. In some dogs, even in those who generally exhibit all the necessary constituents of the racial type, there is often room for improvement. Physical defects, especially in the extremities, are often not so much the result of inheritance, but of faulty upbringing, insufficient and unsuitable food. If we wish to improve the body build from the breeder's point of view, we must always bear in mind the two old maxims of Breeding; "Like paired with like produces like"; and "Unlike paired with unlike aims at compensation". The formula of equality, — it would be better to use the word "similarity" instead of "equality" because this is never found in the real life, — must be corrected with regard to inbreeding by saying that it does not produce equality but progressive and steady development along the lines already laid down. We must therefore always keep this before our eyes that such a development can lead on to over-breeding. With reference to compensation, we must bear in mind that the faults of the one parent cannot be corrected by the opposite fault of the other parent, but only by the highest perfection of this part in the other partner. For example, a short-backed dog will not be suitable for a bitch with an elongated, shaky and weak back and a thick-set dog with straddle-standing fore-quarters is not a fit parner for a high-standing animal with pigeon breast and drawn-in shoulders.

It cannot be said which characteristics are especially inherited among dogs, for up till now, unfortunately, only too little or no attention has been paid to this point. We have a point d'appui when we take notice of another old and therefore thoroughly examined branch of animal breeding, I mean horse-breeding. A well-known expert, Oberlandstallmeister (Chief-Equerry) v. Oettingen-Trakehnen gives the

following answer to the question "What is inheritable in the family"? "There are inherited", he says, "incredibly minute details and fine features in the body-build, as well as in the gait, and in the nature. Above all else the relations between each part of the body are inherited; the length of the hair and its smoothness; the small defects in the coat; courage and fear, maliciousness and intimacy, sterility and fruitfulness, insusceptibility to certain illnesses, longevity, habits and acquired skill; in short, practically everything". v. Oettingen continues, in another passage, "In horse-breeding, effeminacy is the only inevitable fault in the proper sense of the word that is most certainly inherited and which must be eradicated from the stock as thoroughly as possible. The progressive eradication of weaknesses and the laying of the foundation of hardness are the beginning and the end of all horse-breeding." These are weighty words for us dog-breeders which every thoughtful man will endorse, even as also that wise saying attributed to Graf Lehndorff "Absence of defect is not necessarily the height of excellence, but unsoundness is the height of misfortune."

Herr M. Müller has published some observations on the inheritability of the different parts of the body; according to him, the father is said to have the greater influence on the interior and, mental qualities, and also, as a rule, on the setting of the shoulders, the formation of the hindquarters, and the carriage of the ears; while the bitch, on the other hand, has the greater influence on the withers. The head is generally a compromise between that of both parents; defects in beauty of the head are said to be very closely inherited, even as also faults in the "stand", the gait, and the middle, such as flat ribs, a sagging or round back, weak kidneys, and that too from whichever parent had them.

Special attention must be devoted to the character of both breeding partners. There is no doubt that temperament is inherited, and, as we can see for ourselves, particularly those characteristics which give us the least satisfaction, such as weakness, shyness, drowsiness, and maliciousness. The dog must be lively, and full of fire; the bitch must, under no circumstances be weak or shy, because she can not only impart this lamentable characteristic to her young and influence them through the medium of her milk, but later on, she can instil such tendencies into the growing pups by a wild-dog like and un-shepherd-dog-like example. She both transmits and educates, and thus exercises a double influence. In reference to the inheriting of the mental characteristics, it has not yet been decided, whether more have been inherited from the father than from the mother. We can be certain of this, however, that both parents, as a rule contribute in this respect to the inheritable mass. Goethe has expressed this in his wonderful observations as follows:

"Vom Vater hab' ich die Statur, des Lebens ernstes Führen,
Vom Mütterlein die Frohnatur, die Lust zum fabulieren."

(From my Father I have inherited stature and the earnestness of purpose to live; from my mother I have the happy nature, and the

desire to give the rein to my imagination). Both sides must also contribute to give the right spirit. Precipitant gallantry is more a quality of the dog, because he must fight to win the bride; to the bitch, however, belongs the duty of protecting the nest and the litter.

I have already spoken in detail of the great importance of perfecting the talents for work which are latent in the shepherd dog; it will suffice here to emphasise this, that breeding should never be made with animals that are not in work. *The proof of the education of the dog for work is a sine qua non for admission for breeding, rather than Exhibition honours, which afford a very misleading description of a dog's value for breeding, a value compiled from an account drawn up for Exhibition purposes.* We have opened up for our dog fields of activity enough, and every dog need not necessarily be a master of craft in them; he need not even be permanently at work in them. The chief consideration is that the latent talents in the dog should be brought out, invigorated, and thereby be capable of being transmitted. It is naturally not enough to give a dog a short period of training, and then to trouble no more about him but to let him run to seed in the kennel; whoever thinks so had better take to breeding guinea-pigs rather than shepherd dogs.

To-day we are only just beginning to breed a genuine working dog. Dog-lovers had formerly busied themselves much too one-sidedly with a purely sporting breed, and its disadvantages. We must, however, in shepherd dog breeding, reach such a point that the same care will be devoted to developing the quality and the kind of working efficiency, as is directed to the production of external features; in other words, that the breeder will lay as much stress on the value of efficient service as on body-build. In order to attain such an end, he must consult the Family Table, the list of working dogs, and the reports of the preliminary trials of young dogs. Just as the shepherd, formerly and to-day, pairs dogs that are particularly efficient in service, so that he may breed for himself a thoroughly good working stock; so too must the dog-lover, in his choice of breeding partners, have a special regard for the characteristics which are necessary for a good working dog, such as teachableness, vim, and the powers of scent. By means of careful selection, these characteristics can be considerably sharpened and consolidated. *Only thus can we arrive at a genuine shepherd dog breed for efficiency and secure the fullest exploitation of all his powers.*

In conclusion we must take notice of the various conditions of life under which a breeding animal has been kept, because these exercise an influence on the inheritable substance. I have already spoken of the harm that is done through confinement in a kennel, a life of idleness, disease, insufficient feeding and care. Change of residence, and owner can lay up trouble for the inheritable substance, for it can cause a dog to transmit himself in a manner quite different from formerly with another owner, in another place, and under different conditions of life and atmosphere. The animal must first become fully accustomed to his new place before he recovers again his old

power of transmission. That also means that frequent journeyings to Exhibitions with their excitements and disadvantages are injurious to a breeding animal; a dog at anyrate, after such a journey should not be immediately made use of for breeding.

I have already said once that all the details of life have a close interrelation; and that they exercise their influence on the sexual cells, whose constitution at the time of fertilisation is of vital importance for the progeny. In addition to the above-mentioned influences, there are others, about which, indeed, we are not yet sufficiently informed. This at anyrate is certain, that over-exertion and straining of the body, and likewise over-employment of the dog for sexual purposes exercise an unfavourable influence on the formation of the germ cells. This explains why many dogs which are so much sought after for breeding purposes, on account of their Exhibition successes, only transmit themselves in a very mediocre and very unemphatic way. Furthermore, we must consider that male as well as female germ cells have a period during which their powers of development are at their prime, and this lies between their first moment of origin and the time when they become over-ripe. This difference in their state of ripeness and its influence might be an explanation of the dissimilarity of pups in the same litter, which is so often observed. Tests with animals are said to have proved that a female when paired with the male, before the climax of her heat, bore young which resembled the father; while, vice versa, when paired after this climax, the young took after the mother. On the other hand, if the pairing happened to occur at the climax of the heat, some of the young took after the mother, some after the father, and some even harked back to an ancestor.

The determining of the sex of the progeny is the result of the union of the semen with the germ cells; to which part this decision belongs has not been made clear. To all appearances it is that part which has the greatest vitality. This again is not only conditioned by the state of the ripeness of the spermatozoon or of the ovum, but also by the general conditions, especially the health, and, in the case of the dog, by the frequency of his employment for breeding purposes.

Liepmann infers that just ripe semen and over-ripe ova will produce preponderating tendencies in favour of male progeny; and that over-ripe semen and just ripe ova, on the other hand, will tend to a female progeny. According to R. Hertwig, male animals are the result of a preponderance of over-ripe ova and of those which are just at the limit of their vitality. This will explain the greater mortality among male infants which is found everywhere, which in spite of the fact that more males are born, almost leads to precisely the opposite state of affairs in the proportionate numbers of the sexes. According to Darwin, in the space of twelve years, from 7000 litters, the proportion of dogs to bitches then born was 100.1 to 100; and the number of dogs in a year varied from 95.3 to 116.3. A calculation which was made from the information as to litters which appeared in the S.-V.-Zeitung (S.-V.-Journal) of 1913, gave,

from 3819 pups, out of 507 litters, a proportion of 131.5 dogs to 100 bitches. This would considerably exceed even the highest proportion of dogs given by Darwin in his calculations, but would also, on the other hand, go to prove the contention that assimilation between nuclei of the male and female sexual cells, which is the result of in-breeding, produces as a consequence a higher number of male births. The shepherd dog statistics for 1913 were compiled from cases of highbred and inbred animals, while Darwin based his calculations on haphazard litters, observed whenever he could find them. Unfortunately we cannot vouch for the absolute accuracy of the shepherd dog statistics, for the sex proportions for one year appeared to be as if the higher number of dogs was a natural compensation for the lower vitality of the high-bred dogs. It is very remarkable and instructive that in fourteen successive service dog litters, which are included in their total, the proportion of dog to bitch pups was only 73.8 to 100. It is true that fourteen litters, give no really conclusive results, and during the years of the War, a following up of these compilations was unfortunately impossible; yet this proportion in litters should be of the most weighty importance for farsighted friends of the breed. An increase in the birth of dogs is by no means an advantage to the breed; the future of the breed is with the mothers; one good dog is sufficient for many bitches.

Thury's Breeding Law, according to which, just ripe, early fertilised ova produced females, while on the other hand, over-ripe and later fertilised ova produced males, has found several supporters among dog breeders, who, on this account, postpone the act of copulation as late as possible. This theory, however, has many times been shown to be faulty; and that too, not only on account of the lower powers of resistance which has been shown from the progeny of over-ripe eggs. Herr O. Schulze advanced a particularly thorough refutation of this, after having made appropriate experiments in breeding with white mice, an account of which he gave in "Archiv für mikroskopische Anatomie" (Records of microscopical Anatomy). He deduces that, as the result of these experiments, neither the sexual over-activity of the parents, nor close inbreeding, nor incestuous breeding had any more influence on the sex of the progeny than a first birth could be said to incline to any particular sex.

For us then, in this, as in questions of breeding and inheritance, there is still much that is undiscovered. Therefore in addition to that knowledge, capacity, and constant work which are required for the observation of such progeny, and in addition to a detailed examination and a widely-embracing series of experiments, there is also an element of chance. Yet even Chance, "fickle jade", allows herself to be controlled, but she will favour those who do not court her only on very rare occasions. However, I hope that this is quite clear that *breeding worth* and *Exhibition worth* are two fundamentally different things which need not have anything to do with each other; and further, an *Exhibition paper* must never be taken as a judgment of *Breeding value*, but only, and this too with reservations, as an opinion that a dog

might possibly be suitable for breeding. The over-appreciation of points for Exhibition prizes, which depends on all kinds of considerations apart from the dog, can become a real danger for the breed, if that judgment is not based on the sole consideration of what is best for the service dog breed, pure and simple. We assert this in spite of the blind groping of the majority of so-called "breeders", (who are no breeders), for the so eagerly desired prize winners. The brothers of a Champion can often be of more value to the breed than the Champion himself, naturally only for bitches with a suitable strain, because they have preserved more carefully in their germ cells that which appeared more on the surface in their brother; and at anyrate they will not be courted so assiduously as their brother, to the danger of the race and of themselves. In the case of bitches, the qualities for Exhibitions and those for breeding are nearly as far apart as the Poles; fortunately it has not yet happened in the case of the shepherd dog, although there have been, and are, quite a number of unreasonable people who will always forget that for a mother constitution is of far greater importance than beauty. Even the Queen of the Ball-Room is generally not a good mother. It is not to be doubted for a minute that emphasis on Exhibition requirements is a danger to our breed, when the proper education of the dog in question is overlooked. *Efficiency for work must count for more with the shepherd dog breeder than the honours of the Show Ring.*

Let us now once more proceed from the Science of Breeding to the Breed as we actually find it. In the choice of a suitable dog, when all that has been mentioned before has been taken into consideration, and the owner of a bitch is proof against the attractive superstition that the children of a Champion secure wonderful prices, he must now come to an agreement with the owner of the chosen dog. It is altogether because dog-breeding should be the work of dog lovers, because in it so much depends on bona fides, that all the business should be prepared beforehand carefully, and fulfilled as punctiliously as possible.

This naturally is also to be considered in regard to all business agreements, and it is the duty of the honest and upright Breeder to observe them minutely. Negligence in this respect would bring breeding as a whole into very bad repute. There is no doubt that there are people who like to excuse negligence and carelessness in keeping agreements on the plea of "sport", but such are only those who have not the slightest idea of the real meaning of that word. Such people, obsessed with an absolutely misunderstood idea only wish to cover, with it, their criminal negligence, or their dirty trickery. Business agreements, and consequently agreements with the owner of the breeding dog, should always be made in writing, which saves much subsequent irritation, and is a safeguard for both parties. Owners of dogs can save a great deal of correspondence by having special breeding cards or sheets printed. At the top should be a picture of the dog; while a complete Ancestral Table, and everything else worth knowing,

such as training for work, size, kind and colour of hair, should also be given. Of course every opinion of the value of the dog and all bumptious advertisements must be carefully avoided. Nothing but plain hard facts should be given, but it is also possible to give extracts of judges' reports with regard to Efficiency Tests, and Exhibitions, and naturally also the list of Awards gained. With dogs that have been already successful in breeding, it is useful to indicate the same, and the more exactly these breeding cards show the blood strains of the bitches from whom these successes were bred, the more useful will such information be. The breeding card should furthermore show a blank space for the confirmation of the copulation and for the conditions agreed upon. The following conditions are recommended by the S.V.

1. Only bitches of pure breed, sound health and good character will be accepted, after due application has been made at least a week previously. The application must be accompanied by an extract from the Stud Book, with a complete Ancestral Table, and full information as to training for work. If possible, a photograph should also be sent. Furthermore, a declaration must be made that there are no infectious diseases in the Kennel of the breeder. The bitch will be boarded and lodged (for instance in an all-enclosed kennel).
2. Acceptance and the boarding of the bitch will be effected at the owner's risk, who is also liable for any damage done by her.
3. The Stud Fee includes board and lodging, but does not cover travelling expenses. It is payable for the work of the dog, and therefore also it is due in such cases where, on account of the reluctance of the bitch, no results are obtained.
4. The Stud Fee, with the fare for the return journey, and a certain amount for all necessary conveyance must be sent, postage paid, at the very latest before the bitch is returned. Information with regard to the time of the beginning of the season must be forwarded at the same time as the bitch.
5. The Stud Fee amounts to
Reduction to members of the S.V.
Reduction to shepherds and police officials
The Fee is understood to be remuneration for the copulation.
6. Only in cases where non-acceptance can be proved, but not in cases of miscarriage, the dog, if alive, will be at the disposal of the same bitch when she is on heat, and still with the same owner, without further payment. Information about non-reception, however, must be given at the latest 8 weeks after the day of copulation, and 10 weeks after that day, intimation of the birth of the pups is requested.
7. The owner of the bitch agrees to register the whole litter when it is 8 weeks old in the Stud Book of the S.V.
8. The sending of the bitch implies the acceptance of the aforementioned conditions.

The amount of the Stud Fee varies. It generally bears some relation to the value of one pup, when eight weeks old. Before the War, it amounted to something between 35—50 Marks; but in cases where the dog was particularly valuable, it rose to 75—80 Marks. In special cases which were not justified by the breeding value alone, 100 gold marks were asked. Stud Fees to-day vary very much more; in some few cases, no alteration has been made from the old scale; in others again, the demands have now risen to unjustifiable dimensions. To meet this, breeders must combine to protest. If this does not avail, the only course to take is to avoid the animals whose owners make a flourishing business out of their Stud. If we consider that for the dog-lover, the possession of a valuable breeding dog should be, first and foremost, a source of gratification on account of the breed and a satisfaction to himself, but for the use of which we will make him an adequate return for the expenses he incurs for the benefit of the breed, besides the risk of loss, then a fitting return can be calculated in the light of such considerations. Let us reckon the value of a two-year old dog at 20.000 Marks, and 7.000 Marks as cost of maintenance per annum, — which for the moment however is inadequate, — and five years as the period of its breeding value, so that every year $1/5$ of the value of the dog must be written off; and let us reckon a Stud service of about thirty bitches in one year, we shall arrive at the following account.

5% Interest on 20.000 Marks per annum	1.000 Marks
Cost of Maintenance	7.000 "
Yearly Depreciation, $1/5$ of original cost of dog . .	4.000 "
	TOTAL 12.000 Marks
By 30 Stud Fees at 500 Marks	15.000 "

In making this computation, we must notice that a breeding dog, who has been well looked after in his youth, remains capable of breeding beyond the completion of his sixth year, and that in all probability, more than thirty bitches will be brought to him, and also that the cost of maintenance, if it is to be at all commensurate with the present conditions, will be extraordinarily high, and that therefore they will also decrease to reasonable limits again later on, when the times have become more favourable; and that, finally, in accordance with these times, the worth of the dogs is placed very high. Whoever lays on a "fancy" price must, and can, bear the fancier's risk.

The demand often made that, instead of a Stud Fee, a pup from the litter should be given to the owner of the dog, has this to be said for it, that the owner of such a dog in such cases is in the position of being able to dispose favourably of all the superfluous dogs which possess a strain which he does not require. The owner of a dog can and wishes to avail himself of such an offer, only when he desires to secure progeny from his dog with a certain particular bitch for his own Kennel. The arrangements for this too should be made in writing, and the time and the manner of the selection, the sex of the pup, and the compensation to be paid, should there

be no litter, or in the event of its premature death, must all be fixed and settled. On the other hand, the owner of a dog can, and certainly will, make an exception for breeding shepherds, and when he does not wish to keep a pup from a service dog litter, he can always pass it on to the S.V. as an endowment for the training of service dogs.

The Stud Fee is the remuneration for services rendered, and for the work of the dog, but this, however, implies no further obligation with reference to the fertilisation of the bitch, as is so often falsely imagined. The Stud Fee is therefore a lawful debt when the dog, at the time of copulation, and emission, in spite of all his efforts, cannot achieve his object, on account of the unwillingness of the bitch; an occurrence which is by no means so rare, when the bitch is brought to him before she is really ready. In such circumstances, the dog exerts himself very much more and has many more emissions, because he will always persevere in attempting to bring the proceeding to its natural conclusion. If the bitch does not conceive, that does not give her owner the right to demand the return of the Stud Fee; this is only permissible in the event when the dog, after many instances, has been proved to have been, or to be impotent. This proof can only be established by microscopic examination of the semen, and would even then still not be decisive retrospectively. If this too is to be proved, this can only be done by producing several bitches which were brought to the dog without any successful result; for the refusal of a bitch has not very much significance, not even when during a later period of heat she conceives by an other dog. Owners of bitches are naturally anxious to lay the responsibility for the non-conception of their animals on the dog, although, (as we shall see further on) in nearly every case, they themselves, or their bitches are to blame; but they should be very careful indeed in publicly repeating such allegations, for they lay themselves open to legal action for damages. We must also remember that gossip does not lie in the province of our dog-lovers. On the contrary, when practical proofs of the continued barrenness of several bitches, are to hand, then it is time, and the plain duty of their owners to make this known to the owner of the dog. If he is not open to conviction, they then should make public their warning against such an impotent animal.

Although the responsibility for barrenness can nearly always be laid on the bitch, it is customary in S.V. circles to offer the dog gratis for the next period of heat, in such instances where the bitch has remained barren, but not in cases of miscarriage. It must, however, be thoroughly understood, that this is only for the next period of heat, and only for the same bitch, who must also be the property of the same person. The right to this stud service is not transferable; should the dog die, the obligation to this service becomes void; if the dog is sold, such contingent obligations are to be communicated to the purchaser at the time of the sale, and are to be handed on. The whole scheme is the result of a voluntary desire of the dog owner to do his best to meet all claims, which must therefore be a matter of arrangement, included in the conditions, and made in writing. The owner

of the bitch is only legally entitled to avail himself of this right, when he has fulfilled all the conditions as to giving information at the proper time; i. e. after the eighth and the tenth weeks.

To make sure, it is important to conclude the arrangements for the Stud in good time, and to give notice of the next period of heat for the bitch, which will be roughly calculated in advance. Notice of the commencement of the period of heat, and the day on which the bitch will arrive, are then to be sent to the owner of the dog; otherwise, he will be within his rights to refuse to have the bitch, when she is brought to him. Along with the application, it is obvious that the dog owner must be informed of the blood strain of the bitch, her external and internal characteristics, and her working accomplishments. If possible all this should be accompanied by a photograph, because fortunately there are still dog owners who are too particular to place their dog at the disposal of every bitch that comes along. They are rightly anxious that the value of the progeny of their breeding shall not be diminished by unsuitable connections, and thus they set the honour of the breed above mere commercialism. It, of course, goes without saying that exceptions must be made in the case of bitches of the service variety.

The owner of a dog can naturally take strange bitches only when his own animal is quite sound, and when in his Kennel, (should he possess one), there are no serious infectious diseases; especially distemper, mange, or other skin diseases. It likewise goes without saying that, on the other hand, only a bitch in perfect health should be brought to a strange dog, and that she must never come from an infected kennel. An owner, who acts differently, makes himself liable to action for damages, because he is not in earnest, nor careful. The owner of a dog must take care to secure board and lodging for a bitch that has been sent to him, or else he must never accept bitches whose owner does not bring them to him personally and take them away immediately after the copulation. It is a torture to leave a bitch, that has been sent in her travelling box while waiting to be served, or to be sent home.

An all-enclosed room with a little kennel should be provided for strange bitches that arrive, in which some exercise can be taken by the visitors. It need hardly be said that these places for strangers must be cleaned out every time after they have been used, and purified from anything that might convey infection.

The sending of a bitch by train should only be done as a rule when no other way is available. *Whenever possible, the breeder should himself bring the bitch to the dog;* she will then give herself to him with more confidence, when accompanied by one whom she trusts. The occurrence of the highest sexual excitement in the female is not necessary for fertilisation; but fertility is further helped when the resultant copious emission of semen finds its way right into the womb of the mother, and causes there the usual motions of the female sexual

organs. A bitch brought in unaccompanied would, in her fright at being abandoned, often make serious difficulties for the dog and for his owner. The mental emotion experienced in that situation, and the coercions that perhaps might be necessary, would probably effect the progeny, influence them mentally, and make it even problematic whether the mother will conceive.

It would also be more convenient to the owner of the dog, if the bitch is accompanied by her owner. If the dog is not already known to him, he will accompany the bitch so as to satisfy himself that the dog is suitable for her from the point of view of external features. To one who is dealing with a dog owner with no experience and knowledge, on the other hand, this is especially to be recommended, because many dog owners simply shut up dog and bitch together, and then leave them to their own devices. This naturally gives no guarantee for a regular copulation. Finally, there are said to be dog owners — in a shepherd dog Kennel we devoutly hope not — who, along with the sought after dog, keep a substitute who must copulate on the quiet, when the other is unwilling.

The occurrence of sexual desire or heat in the case of domestic dogs, as already explained, is no longer confined to certain particular periods. Generally, it may be said that the bitch becomes "on heat" every six or seven months, and that, between the birth of the litter, and the commencement of the next heat, there is an intervening period of five months. If by chance, the bitch passes over the period without becoming on heat, she usually comes on heat again about the same time after, and frequently earlier. Dogs are at all times ready to copulate, so long as they are in good health and conditions.

Young bitches usually have their first period of heat somewhere between the eighth and the tenth month. It only occurs in a very mild form and on this account is often unnoticed, and when this is the case, it can often lead to some very unpleasant surprises. The second heat, as a rule, follows between the twelfth and the fifteenth month, when naturally too the young bitch is not yet ripe for breeding. The intelligent breeder will therefore wait until the third period of heat, which occurs when the bitch is at least twenty months old. Young dogs too are also ready to copulate at an early period, when an opportunity presents itself. They are, as has been proved, capable of copulating as early as the eighth or the ninth month; and therefore they must be looked after when bitches that are on heat are in the neighbourhood. To use young animals of both sexes before the proper breeding age, — and this indeed cannot be called breeding, — is a criminal offence, it is a sin against the race, against the animals themselves, and against the purchasers of their progeny. I should like to see the faces of such breeders, when their own sons of 14 or 15, or, for all I care, of 18 to 20 years of age, came to them with a demand for the money to defray the necessary expenses of such a proceeding; or even their daughters either. But in the case of dogs, whatever does it matter? It costs nothing, it creates no scandal, and, on the contrary, brings in MONEY.

If the period of the heat lasts longer than usual, it is the result of general bad health, or a disease of the ovaries, or of the womb. Sometimes it is even the result of a previously unnoticed miscarriage during the last period of gestation. In such cases a veterinary surgeon must always be consulted; just as in the case of irregularities in another direction — for instance the too frequent, too early repetition of the period of heat, — which mean a weakness of the inner parts, and will not be advantageous for the breed. During such periods of false or pseudo-heat, the bitch should on no account be brought to the dog; if she is brought, more often than not she will not breed, or if she does breed, she will only bear short-lived and deformed pups in small number.

Since the beginning of this century, use has been made of Yohimbin to stimulate the sexual instinct, the desire for copulation, and the capacity of the dogs for breeding and to promote an overdue heat in the bitch; this is also called Yohimvetol in the preparations made up in animal Pharmacy. Formerly, this could only be administered on the order of the veterinary surgeon; unfortunately now, it is accessible to everyone and consequently great mischief can be done. If a dog is no longer desirous or capable of breeding, then he is ill, old, or used up, and under no circumstances whatever should he be used for breeding any more; for he can only beget weak progeny with no constitution. When this aphrodisiac is administered to dogs, it accordingly does nothing for the breed, but only for the purpose of the keeper of such a dog. In the case of bitches, under some circumstances, it can, if used with care, be administered with advantage, but this should always and only be done when prescribed by a veterinary surgeon; the bungling of laymen always does harm.

On the other hand, Hydrastinin is used as a means by which the heat of the bitch is not entirely suppressed, but the external phenomena are restrained and the period shortened. The bitch, however, must in this case, be allowed her usual period of heat later on. This remedy has not been sufficiently tested, and should be used only on the recommendation of the veterinary surgeon. There are circumstances, under which it can be profitably used; especially when genuine dog lovers, who do not wish to breed, keep a bitch because they have a special preference for her characteristics. Oviotomy, or the removal of the ovaries, would naturally put a stop to the occurrence of the phenomenon of heat, but it cannot be sufficiently emphasised that such drastic measures are not be resorted to because, after such an operation, the nature of the animal is entirely altered, and for the worse. For us dog-lovers, the characteristics and the nature of the dog are absolutely all that matter.

The symptoms of approaching heat are not identical in all bitches, and do not make their appearance in the same unmistakeable way in every case. When some bitches are on heat, they become moody and withdraw themselves into some hidden corner in a fit of shyness or sulks, or they acquire a taste for prowling round; others again, huddle up close to us, and discard their usual distrust of

strangers. One loses obedience, another the powers of smell, and accordingly refuses food. Young bitches who do not yet understand the mysterious occurrence in their interior economy exhibit sometimes, in consequence of the flow of blood, a desire to dance round after their "posterior", and they turn, as if furious with themselves in order to overtake the itching part, to lick it, and even to bite it. Towards the close of the period, when the above mentioned signs are shown, all bitches begin to run after dogs; generally without allowing the slightest familiarity, but they will worry them, ride round on their backs, after the manner of dogs, and, *faute de mieux*, they will even do this with members of their own sex.

In the preliminary stages, the external sexual parts gradually distend and swell up. The increased flow of blood to these parts causes an inflammation; finally, a more or less copious (though it is usually rather less than more) discharge of blood flows from the vagina; the so-called "reds". One can reckon from one week to a fortnight for the commencing signs, and as long, or longer, for the "reds".

Young bitches and those who have had no intercourse with a dog, usually keep him at a distance till the cessation of the reds. Older bitches are not so reliable in this respect; and are very much quieter the whole time. They will even sometimes allow the dog to come to them weeks after the cessation of the reds. Because bitches on heat are a powerful attraction to the ever-courting dog, and because even the most modest beauty, when her time is come, cannot always remain without pity and ice-cold in the face of such ardent wooing, a bitch on heat therefore, as soon as her period has commenced, must be shut up and kept in till it is fully over.

Some cruel villains sometimes sew up the edges of the vagina with silver wire, and thus close the entrance, and where possible, allow ends of wire to protrude outside; and then send their bitches out on to the street. If such a closing were recommended by the veterinary surgeon, and all proper precautions were taken, nothing could be said against it. Such a protected bitch, however, must never be taken out in the street, because she does not lose her powers of attraction. This sewing up, which is practised among several South African races, even to-day, as a means of preserving virginity, is, notwithstanding, for the decent owner, a thoroughly useless remedy. Lately, too, a leather safety-girdle has been produced for the same purpose; but I fear it would afford as little security as "The Girdle of Chastity" in the Middle Ages.

The shutting up of a bitch on heat in a kennel can never be too safe and secure. Love not only makes her blind, so that the highest-bred bitch will give herself to the most terrible cur; it also develops a spirit of inventiveness. Many a Don Juan has known, when he discovered the usual entrances barred to his advances, how to find his way underground or in the air. The safest plan is for the owner of a bitch on heat to keep the key of her kennel in his own pocket.

If by any unfortunate chance, a mésalliance has occurred; there is indeed a remedy by which the results may be avoided (which,

however, when used by lay people has only a very remote chance of success), when employed immediately after the copulation. This consists in a thorough and penetrating douching by means of a syringe containing about a pint of water that is warm to the hand. A few drops of spirits of salt (Hydrochloric acid) or a little vinegar should be added to the water. When intruding the well-oiled india-rubber head of the syringe, great care must be taken not to injure the inner walls of the vagina. The vagina does not immediately take a straight course, but first of all rises in a slight curve. Whenever possible, the bitch should be brought to the veterinary surgeon for such a douching, because the wash should be sprayed into the womb itself, which cannot be done by an unskilled person. Such precautions, however, can only be taken in the very first hours after copulation, if they are to have any chance of success.

Further attempts later on are only a waste of time. If they are directed towards procuring abortion, they are always very risky, and must be ruled out of all calculation, because they are dangerous to the life and the health of the bitch. I can, accordingly, only advise that in such circumstances no interference whatever be made during the period of gestation and with the litter, and that when the litter is born, not all the pups should be taken away immediately from the bitch, but that two or more should be left, according to the condition of the teats. If the food of the bitch is cut down to a small quantity, the secretion of the milk will very soon begin to decrease. After about two or three weeks, the pups that were left with her can be taken away one after another and can "shuffle off this mortal coil" in the train of the predeceased brothers and sisters. It is important also for the involution of the womb that all the pups should not be killed at once.

The later breeding value of a bitch is in nowise depreciated by the misfortune of a mésalliance. A further influence of the spermatozoa on the still unripe ovaries never occurs. It has been attempted lately to find the foundations of a theory of the possibility of an "indirect procreation" (called "Telegony", also "infection", or "Impregnation"). Conclusive proofs that this further procreation is possible and can influence the breed have yet to be forthcoming.

The earlier explanations that an influence was exercised by the superfluous semen on the still undeveloped ova at a later period of heat were untenable. Later on, Loisel pointed out the possibility of this semen being absorbed by the vessels of the Fallopian Tubes, and thus entering into the blood of the mother; also that, in mammals at least, the semen of the father came into contact with the blood of the mother through the placenta. Even if this possibility is assumed, the consequent probability of this transmission to the later progeny appears to have a very small chance, as compared with the transmitting power of the semen of a later copulation. Special experiments with animals, and those too with dogs, which were made to prove this indirect procreation, remain without any real tangible results; on the contrary, all the arguments which up to now were advanced in

favour of indirect procreation can be explained without any straining of facts, by the phenomena of "throw back", or else by a new mésalliance. The possibility therefore of indirect procreation, if it is proved, must hold good not only for breeding partners of different races, but for parents of the same race, which would make breeding for blood strains nearly impossible or useless, if in all later births, the first sire should have some influence. This also contradicts all breeding experience, although breeding circles, and especially dog breeders, believe, to quite a considerable extent, in indirect procreation. Simple minds are these for whom the obvious is obscure, or is not sufficiently full of mystery, and who in their sweet simplicity are often enough inclined to pin their faith to superstitions or the Mysterious. The fact that dog breeders, of all people, so stubbornly believe in the possibility of indirect procreation can be easily explained by this fact that, cases of throw back to former ancestors, and above all, mesalliances and such, of which the owner at the time had not the slightest knowledge or idea, are so frequent among dogs. Moreover this belief is so very convenient for laying the blame of one's own mistakes as a mantle trimmed with a soupçon of scientific learning on the shoulders of someone else.

As we have already seen, the bitch goes on heat twice in the year and can thus bear two litters. When he has a sound, thoroughly strong and suitably nourished bitch, the breeder, (who indeed only allows a limited number of pups to survive, at the most five) ought to be content to follow the dictates of Nature; of course the mass-producer of shepherd dog "goods" acquiesces in this without any further ado. If a period were neglected, such a bitch would gain nothing but fat, which, however, would reduce her fertility and suitability for breeding. Subsequent irregularities in the periods of heat can also be attributed to such neglect. A bitch, who is weakened by disease, or by the last litter she had, must indeed be spared, also weak and delicate animals; with such, no breeding at all must be allowed to take place. Under certain circumstances, local conditions might influence the breeder against rearing pups in the winter months, say from November to February. Generally, however, our race is so hardy, and is so little susceptible, that even in this case, no extraordinary precautions are demanded. On the contrary, the less the pups are coddled at the beginning, the stronger and more energetic shepherd dogs will they become later on. I know of litters who have been born in a small kennel out of doors in the depth of winter, and which were brought up there. If a period of heat must be foregone, the bitch must be very carefully shut in, and must not come out of her solitude, until she has lost all power of attraction for dogs; this precaution must be accompanied by a suitable diet, and by plenty of exercise, which will prevent her becoming fat.

To a dog, who was well looked after when young, who is sound and vigorous, if he is well and suitably fed, from thirty to forty bitches a year can be brought for one copulation each, without any

harm to him. A more frequent use diminishes the breeding power, and the worth of the progeny, which becomes light-boned, valueless, and of feeble constitution. Over-excitement, which is the result of too many and too frequent copulations, as well as overstraining with an unwilling bitch can lead to various kinds of diseases of the sexual organs.

The favourable time for the copulation is about the end of the bleeding; that is about the eighth or the tenth day after its commencement. Before this time, the bitch will not stand, or at least not willingly. Many breeders postpone the copulation with the dog, if possible, to the end of the period of heat; of the results of which proceeding I have already spoken. In addition, there is this further danger, that the bitch will not receive the dog, or that the over-ripe fruit will cause him no more sexual irritation. In order to find the right time, it is useful if the owner of the bitch has a "tickler" at hand; that is, some dog or another to whom the bitch can be brought, so that her behaviour and her readiness to comply with a dog can be tested. If she is prepared to stand, (naturally all these experiments must be conducted with the greatest possible care), then it is high time that she should be taken to the selected dog. If this dog is not in the same neighbourhood, then the time for travelling must be taken into consideration. There must therefore be no waiting at home till the bitch stands ready for the "tickler", otherwise she might be brought too late to the dog with which she is intended to copulate, for the disturbance occasioned by the journey might bring the heat which is already on the wane to a premature conclusion. In the case of some sexual and, (which is closely connected), temperamentally unsound bitches, the heat is at its height only for a few hours, and they will be amenable to the dog only in these very restricted periods. If these bitches have not copulated as a consequence of their own peculiarities, I am of the opinion, be they never so beautiful externally, that this will be no loss to the breed, for they would transmit to their progeny their innate deviation from sound Nature, and that only too probably in an exaggerated form.

The copulation will be all the more satisfactory in proportion as all compulsion and artificiality are reduced to a minimum. If the character and the disposition of the bitch are not sufficiently well known beforehand, a well fitting muzzle must be provided in advance; because, some shy bitches snap at the dog and can cause him unpleasant injuries, especially on the ears. The bitch must be habituated to the muzzle by her owner beforehand; and he must bring one with him, or else must include it in the travelling box. It is best to bring a dog and bitch together in an enclosed room where the floor is not too slippery and to leave them there to run round and to get to know each other. If the bitch should go to the dog with amorous advances, the game is generally already won. The bitch can then be taken on a short leash, and in addition, be held fast by the collar till the copulation is over. After the usual preliminaries, the dog tries first of all by pushing motions to insinuate his penis into the vagina of the bitch, if he succeeds in doing this, the pushing motions will

gradually become rubbing motions, — as a result of the commencement of the swelling of the glans penis, — which can be recognised externally by the treading motions of the dog. The cessation of this treading is a proof of the consequent emptying of the semen into the vagina, from which however, the penis cannot be withdrawn, as it is swollen to about the size of a fist. Then occurs that which in all dog races is recognised as the "hanging together", which secures the proper entry of the spermatozoa into the womb. After the emptying of the semen, the dog dismounts and stands by the side of the bitch; and then with his hind leg over the bitch and the penis still in the vagina, he generally places himself, haunches to haunches with her, and then while still hanging together, dog and bitch turn themselves about frequently with the forequarters and the head towards each other. This hanging together continues till the shrinking of the swollen part has taken place, which in the case of a first copulation will take from twenty to thirty minutes, and can last even longer, though mostly it is finished in a shorter time. During this hanging together also, the bitch must be held fast to prevent her throwing herself down and thereby injuring the dog. A forcible separation from this hanging together can result in serious injury to both animals. The only thing to do, even in the case of a pair caught in the act of consummating a mésalliance, is to wait for the natural termination; if cold water is available, a careful washing of the place where the binding occurs will facilitate the shrinking of the penis.

Between dog and bitch there are sometimes considerable differences in size; in such cases standing up or down hill, or an arrangement with boards, on the edge of which the hindquarters of the bitch are placed, can overcome this. Some bitches remain coy for quite a long time. If they are not ready for copulation, an old experienced breeding dog knows this very soon by the smell, and does not over-exert himself at first, because he knows very well that when ripe, the fruit may be had for the plucking. Young and impetuous dogs can indeed waste much valuable strength by such fruitless attempts, and on this account, should be soon taken away from the bitch. If, on the other, hand, the bitch is not favourable because she was brought too late to the dog, he will quickly lose the desire to copulate, when he finds out that he was first deceived by the lingering scent of the heat at its height. There are also other reasons for coyness, for instance, the feeling of being forsaken, when a strange bitch may have shyness, or fidelity to another chosen lover; the confidence of the bitch therefore must be won by suitable behaviour. A too impetuous dog must then be held on the leash, so that the bitch may feel unconstrained, and may seek him out of her own free will. Generally, curiosity leads her on quite soon enough, and then she will give herself to him. If the bitch is well known, she will allow an imitation of the embracing motions of the forequarters of the dog to be made by means of the thumbs and index fingers which will produce a sexual excitement, which is also the case when the teats are tickled, for this has a sympathetic reaction on the sexual parts.

If nothing avails, and, in spite of all this, it is absolutely necessary that the bitch be covered; then coercion in some form or another cannot be avoided. There are also, however, some dogs who will refuse to copulate where too many helpers are occupied with the bitch in this matter. While one helper holds the bitch with both hands and by the collar, and prevents her from shrinking to one side, or from throwing herself down, a second kneels close up to her side and does the same by pressing his knees against her and clasping her round the body by one arm. In certain circumstances, a helper is necessary on each side; especially when, instead of the arm, a cloth is held under her body. I prefer the arm of the kneeling helper to the cloth; he is in the position to guide and to introduce the searching penis of the covering dog with his free hand. Or else, the hand can be pushed under the vagina of the bitch, and it can be held high so that it can be brought up against the groping push of the dog. It often happens that the unsuitable opening of the vagina is the chief impediment, which makes it appear to be coyness; and makes force necessary; but this difficulty can be made easy and obviated in the manner already described.

Hanging-together is not an absolute sine qua non for fertilisation; but it makes assurance doubly sure. To ensure fertilisation, it suffices that the semen itself should be squirted into the vagina; but this can also occur in a restless ticklish bitch in the last moment, before she succeeds in withdrawing herself from the full-swelling penis. In such cases, even as after the natural loosening at the conclusion of the hanging together, the bitch must be prevented from sitting down and from getting rid of the semen squirted into the vagina by making water. Healthy urine produces an acid and a chemical reaction on semen; for acid attacks the vitality of the spermatozoa and can immediately destroy them. The mucous itself in the vagina therefore is always acid; and the spermatozoa would soon be destroyed, but they encounter a projecting part of the mucous membrane hanging from the womb, which is not acid but alkaline, and on which they arrive in time at the neck of the womb and further. The further towards the womb the emission of the dog goes, the greater the chance of fertilisation. The dog also, after a premature separation should not be allowed to sit down and to lick the still badly-swoollen glans penis, to which he is naturally inclined, he should be led to and fro gently; and a careful washing with water, which is not too cold, will soon effect the shrinking of the penis. After the copulation, the bitch should be allowed to remain quietly indoors, tied up for a few hours. Generally, neither animal should be fed before the copulation; the dog should have had his last meal from three to four hours previously, because the sexual excitement, and, in the case of the dog at least, the strain on the viscera, can lead to vomiting.

That hanging-together is not absolutely necessary for fertilisation is proved by the possibility of artificial fertilisation. In this process, the male semen is sprayed by man into the bitch without any working of the dog. The semen can be drawn out of the vagina

of a bitch which has just previously copulated, or can be obtained from the dog by other means. Naturally, extreme care and cleanliness must be exercised. The semen which is then thinned to avoid condensation, is kept at a constant body temperature until it is injected into a suitably prepared bitch. This is best-effected by means of a glass syringe which conveys it directly into the womb through the orifice. From $\frac{3}{4}$ to $\frac{1}{2}$ of a ccm of semen is sufficient for a bitch; so that out of a copulation with one dog, in addition to the bitch that was covered, four or five other bitches can be artificially fertilised; but the whole of this process should only be carried out by a veterinary surgeon.

Artificial fertilisation in animal breeding has already been employed several times. Many advocates for this have been found, especially in America and in Russia, because the seed can thus be utilised at long distances which would be too far to convey the breeding animal. At the present time, when travelling is so difficult, artificial fertilisation could have a considerable importance for our home-bred dogs, when further developed by thoroughly expert people. The breeding of service dogs especially, which is carried on by small breeders in the country could also derive much economical advantage from this. A sine qua non for the general introduction of this should be that proper measures will be taken to avoid all possible misuse of the seed by the owners of covered bitches, as well as all other attempts to cheat which are bound to be made. So far, it has not been proved that artificial breeding has exercised any deleterious effect on animal breeding, on the contrary, the percentage of fertilisation is said to be higher than in the natural process.

I have already explained that the capability to breed, and fertility depend on various causes. It is easy to prove the vitality of male semen by subsequent examination under the microscope. One minute drop of semen in a warmed testube, brought under a lense, which gives from 3—400 magnifications, reveals hundreds and thousands of lively, wriggling, tadpolelike spermatozoa. Owners of dogs can thus easily test the breeding capacity of their dogs. The chief cause of sterility in the case of bitches is the presence of inflammation in the vagina, the womb or the ovaries. This inflammation always causes an acidification and a discharge of mucous; and acid, as we said before, is fatal to spermatozoa. Not a few bitches suffer from such latent inflammation; they never become fertile, but their owners allow such "semen coffins" to go from dog to dog, instead of consulting the veterinary surgeon. A careful douching of the vagina with a 3% solution of soda is recommended as a temporary remedy against the deleterious acidity of the discharge.

One copulation is sufficient to ensure fertility; to demand a repetition therefore is unwarranted. If for any particular reason it is necessary that such take place, this should be done not later than twenty-four hours after the first copulation. It is not possible that the second copulation should exercise any influence on the ova

that have been already fertilised by the first, but by it, ova that have ripened subsequently can be fertilised. If the fructification of the second copulation is considerably later than that of the first, the result will not yet be fully developed at the regular time of the birth of the first, and will possess less vitality when brought to light, or else it will die off in the womb of the mother, and cause there serious disease and parturition fever. On rare occasions, bearing of separate groups of pups has taken place; in such cases those that were later conceived were regularly developed.

From these facts, it will appear that a bitch can be fertilised, by more than one dog; either by one shortly after another, or, when she stands longer, some appreciable time after the first fertilisation. This occurrence is called "superfecundation", as distinct from the not yet sufficiently proved "superfetation", which, during pregnancy, presupposes the full ripening of the ova during the condition of pregnancy, which is impossible for bitches whose periods of heat are more distant from each other than the actual period of pregnancy itself. If during one period of heat several dogs have copulated with a bitch, — which can easily happen, if sufficient care is not taken, — then all the dogs must be considered as the fathers of the pups, because the responsibility of any particular dog for the progeny can never be sufficiently fixed. In such cases generally there are participants, other than the chosen one, which in blood and external features were not suitable. If, however, a dog of an alien race has made his advances with success, the whole litter must be considered as "mongrel", and cannot be entered in the Stud Book, although it is obvious that one pup can only have one father, because, as we saw, the ova are immediately closed after the reception of the spermatozoa by means of an impervious covering. If by chance, a dog of another race had copulated with the mother, as well as the shepherd dog, progeny from the two fathers can appear in the litter, which later on can be distinguished with certainty either as pure-bred or mongrel pups. I would recall in this connection what I have already said about the determining power of survival inherent in shepherd dog blood as compared with other strains. All fine tales, as for instance, "the living spit of his shepherd dog papa" are only "for the marines", and the breeder must, notwithstanding, suffer the results of his carelessness. He must even, when he learns afterwards of the mésalliance, (which is said to happen sometimes), at once himself request the removal of the record of the mongrel litter from the Stud Book. If he neglects to do this, or says nothing about the copulation with several dogs, whether they be similar animals, of the same or of an alien race; he makes himself guilty of a serious betrayal of the trust and the confidence reposed in the breeder, and in breeding according to the Stud Book, which must be rigorously dealt with.

During the first four or five weeks of pregnancy, it is not possible as a rule to observe the resultant fertilisation of the mother. As a first sign of pregnancy occasional loss of appetite and also the desire for all kinds of food for which hitherto preference had not been shown

may be observed. There are also occasional vomiting, the beginning of uncleanness at nights; and the periodic moaning of the sleeping bitch. A swelling of the flanks is first noticeable about the fifth week; this becomes more pronounced as the period of pregnancy progresses, and towards the close, it becomes most apparent in the hindquarters.

Sixty-three days are generally reckoned as the ordinary period of pregnancy. The following summary is also reckoned on this calculation, which indeed is a little too high. The already mentioned calculation, which is made on the basis of the Kennel News of the Stud Book for 1913, fixes for 507 cases of pups which were noted, an average period of pregnancy of 61.6 days. A similar result, namely of 62 days, was arrived at on the basis of the calculation, made of 347 litters which were entered in the Stud Book of 1915. By placing the two totals together, we arrive at the calculation that most of the litters were born on the 62nd day; some on the 61st., some on the 60th., and finally, some on the 63rd. Nearly half, that is 40% of all the litters, were born after a period of from 61—62 days and 60% after a period between 59—64 days. Births which occur before the 59th. day can be described as "early", and those taking place after the 64th. day can be described as "late". Early births, — 3% took place from the 55—57th. day, and 5% on the 58th. day, — are always the result of a careless exercising of the mother. Unfortunately the compilation has no information to give us about the length of life and the vitality of the early-born pups. Of late births, 4% were born on the 65th. to the — 72nd days respectively. This can be explained by supposing that they are the result of the fertilisation of the ova that first became ripe after the copulation; they can also be the result of a further, later, unobserved or unrecorded copulation; or, even as in the case of premature births, they can be the result of a faux pas before the real and desired copulation.

The feeding of a pregnant bitch should be nourishing and ample; but the stomach must not be overloaded, so as to spare the back and the ligaments of the body. The quantity of food given must also be distributed over several meals in the day, and must be as nourishing as possible. To-day it is a work of art for every breeder to arrange this in proportion to his means and the food which is available. Formerly he could do this easily, for he gave Phosphorus-cod-liver-oil puppy food as a staple diet, to his pregnant bitch and thereby improved the flesh-forming and milk-giving tendencies. That these pleasant, comfortable and cheap times will come again is not to be expected in the near future. We must therefore moderate our desires and feed the prospective mother as well and as richly as we can. I will give some guiding principles about this in the next chapter. We can however, only say here that the pregnant and sucking bitch must be given food containing lime and phosphorus in large quantities, every time she is fed. The growing progeny make use of lime in large quantities for body-building. It assimilates this from the blood of the mother; who again, when she is not nourished on this in her food, must extract it from her own body. This would be done

Computation of the period of Pregnancy reckoned on the 63 days basis.

Breeding Day	January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Whelping Day	March	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	April	1	2	3	4		
Breeding Day	February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	May	1	2	
Whelping Day	April	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	June	1	2				
Breeding Day	March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	July	1	2
Whelping Day	May	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	August	1	2		
Breeding Day	April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	September	1	2
Whelping Day	June	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	October	1	2		
Breeding Day	June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	November	1	2
Breeding Day	July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	December	1	2
Whelping Day	September	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	January	1	2	
Breeding Day	August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	February	1	2
Whelping Day	October	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	March	1	2		
Breeding Day	September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	April	1	2
Whelping Day	November	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	May	1	2		
Breeding Day	October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	June	1	2
Whelping Day	December	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	July	1	2		
Breeding Day	November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	August	1	2
Whelping Day	January	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	September	1	2		
Breeding Day	December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	October	1	2
Whelping Day	February	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	November	1	2	

at the expense of the skeleton, especially of the teeth, and also of the nerves. Phosphorus is also necessary for the germ during growth, and for the pups Food containing lime and phosphorus also improves the quantity and the quality of the milk. Lime is best administered in the form of Calcium Salts, and Phosphorus as "Lecithin".

The pregnant bitch should be often in the open air; she should have plenty of exercise, but this must never be overdone. Violent exercise, jumping, playing and romping with other dogs, and boisterous running should be avoided at the end of the period of pregnancy; and naturally all pushing and fighting. All this, as well as bad health, leads to miscarriage, which often happens so secretly at the beginning of pregnancy that an observer who is not very attentive will attribute it to sterility.

In the first days of pregnancy, the bitch must be freed from all intestinal parasites. It is better for safety's sake to administer a worm cure, and also to repeat the dose three or four weeks later, but no more. So too, if the future mother is not free from insects, luke-warm baths may be carefully given as a remedy, even shortly before the birth of the litter.

The bitch's place is to be prepared about a fortnight before the day on which the birth is calculated to take place. In order to accustom her, and because bitches, towards the close of the period of their pregnancy, are usually unclean in the room at night, (a natural consequence of the gradual distention of the womb), it is recommended that the bitch be shut up at night in the room prepared for the future litter. When a special kennel is not available, it is sufficient to have a covered-in shelter, an empty stall, or a spare room in the house. It is enough even, when one has a good small kennel in the open that is well-protected against damp, (which might penetrate through the floor), and against rain and wind. Sheds which are occupied by other animals, and especially cow-sheds, are to be avoided. Cold by itself does not do much harm, but the room must most certainly be dry, and the box for the litter must be protected against draughts. A detailed description of a box for the litter will be given in Chapter 7. I have changed my opinion that a special place should be prepared for the bitch in the box, because she scratches out the bedding on all sides, so that the newborn pups lie on the bare boards; there they rest and it is better so than on straw made wet with the waters of parturition. The pups too have a way of getting under the straw and can thus be easily suffocated or overlain. For my part, I put bedding or chaff into the box about the third or the fourth day, when the mother no longer remains constantly with the litter, and the pups have gained a certain amount of strength. One must not forget, however, to lay a piece of thick turf under the floor of the litter box to keep out the rising cold and damp.

An intelligent bitch will soon learn to understand the meaning of this thoughtful care for her charges, will gladly go to the nest, and will not create any disturbance by whining and howling. If the making of the nest is neglected at the right time, an older bitch will often do

that herself in a place which appears to her to be suitable, but she does not always do this with a strict regard for her owner's comfort and property. The demands of Nature are imperious. If the bitch is overtaken with the pains and gives birth in an unsuitable place, she must on no account be disturbed but must be allowed to remain there quietly, and then when the birth of all the pups is over, mother and litter can be brought to the nest that has been prepared in the meanwhile. There are no distinct signs by which one can recognise the approach of the birth. Generally the pains come on quite suddenly; then follow the waters of parturition and the birth of the first pup. The previous presence of milk is not always a sure sign, because it is already to be found in some bitches a considerable time before the birth; in other cases, on the contrary, it is first found when all the pups are born. Sometimes milk is found in barren bitches; some prepare themselves a place at this time and behave themselves as if they were going to give birth to a litter. Herr R. Müller attributes this to the action of inherited impulse.

The bedding for the nest, — which may be hay, soft straw, fine shavings, but which must never be cloth or the like, because it easily harbours the eggs of belly worms, — must be frequently renewed to keep the pups free from all vermin and be sprinkled with an insecticide; anything, however, with a strong odour is to be avoided. Pine-wood shavings discourage the presence of fleas. A good mother does all she can as a dog, to keep the nest and the litter clean; but her efforts should be supplemented continually by the work of the breeder. If the mother and the pups are not kept clean; there will be a speedy invasion of all kinds of insects, fleas, dog-lice, and hair vermin; fleas and hair-vermin are dangerous as carriers of a kind of tape-worm. These insects not only disturb the growing pups, but they weaken them by interrupting their sleep, by depriving them of substances which are most necessary for health, and by the introduction of loathsome skin-diseases.

The litter is born mostly during the night, and in the majority of cases it is quickly over without a hitch. The breeder will accordingly take care that the bitch shall remain undisturbed, and free from too frequent visitors, and especially from strangers; and not made restless by the approach of other dogs. He will disturb her himself as little as possible; some bitches insist on this in no unmistakeable way.

A layman must not try to assist at the birth. If serious symptoms should appear either during or after the birth, — prolongation of the birth, wrong position of the pups in the womb, falling of the womb or of the vagina, damage of the sexual parts, a feverish condition, or if the after birth is not expelled, — then the veterinary surgeon is to be sent for as quickly as possible. If the mother, through ignorance, or through weakness, neglects to lick the pups dry, the breeder must take care to dry them with a soft woollen cloth. This is the case too with the dividing of the navel cord, when the mother has not taken care to bite it through. The navel cord in this case must be bound with a silk cord dipped beforehand in an antiseptic solution, about

1/4 of an inch from the wall of the stomach; and must then be cut through with sterilized scissors just in front of the part that has been bound.

Generally the bitch performs all these duties herself; she also eats the after-birth, and the navel cord without leaving any trace, so that she could have her confinement in a drawing room were it not for the fact that the penetrating waters of parturition leave their unsightly traces visible. These waters often dye the teeth of the mother which come in contact with them, but only for the time; and in that case, they are blackish in colour.

Shortly before, or during the intervals between the different births, the bitch takes nothing for herself except some cold water sometimes. When the birth is over, the mother can be given either sweetened milk or water gruel; after which the bitch and the litter are to be left alone for several hours.

After this interval of quiet, the litter must be examined. For this purpose, the mother must by all means be turned out of the room; a short run out of doors is necessary for the sake of her own health and relief. The pups must then be taken carefully out of the box, and laid in a basket filled with hay; when necessary the floor of the litter-box can be cleaned with a sterilising solution, but must afterwards be thoroughly dried. The pups must be examined to see whether they are deformed, and vigorous, and further, to see how many there are, and the sex.

Usually the bitch will give birth to more pups than is good to leave with her. For a mother who has given birth to her first litter; if she is not specially strong, (and under the present conditions, when the question of feeding is difficult), not more than two or three must be left, perhaps four under favourable circumstances, when plenty of food is available, but at the most more than five must never be left with the strongest mother. *The result of leaving too many pups with the mother is not seen all at once.* The supply of milk from the mother at first is quite enough for the needs of the newly-born pups. During the further development of too numerous a litter, pups will soon be found out that are not doing so well as the others; these are the weaklings who are pushed away from the source of nourishment by the stronger or the more clever ones, and who finally will only find it empty, when at last they do succeed in getting there. These weaklings will perish at the first approach of infection, and are a constant source of infection for the whole litter. Even if they should succeed in "wangling" themselves through all the dangers of upbringing, they will develop into somewhat weak dogs. It is a most urgent necessity for the sake of our race, that we should be able to bring up strong, powerful dogs; and this should be the ambition of every breeder. The allowing of too many pups to survive is the point on which many breeders unfortunately still err through thoughtlessness or avarice. The Stud Book proves how often, in spite of warnings and counsels, litters containing far too many pups, 7, 8 even 10—12 were brought up.

According to the already frequently quoted calculation, made on the information supplied by the Kennel News of the breeding year of 1913, the number of pups in a litter varied from 1—15; 80% of all litters numbered between 5—10 pups; and the average number in a litter was 7.53 pups. This number can also be proved from other calculations to be generally correct; 33% of all litters gives an average of 7 or 8 pups. I have already spoken of the rule governing the sexes. A connection between the proportion of the sexes and the quantity of pups in the litter is no more found, than between the number in the litter and the period of pregnancy. The domestic dog gives birth to more numerous litters than the wild dog; in a wild dog litter, mostly 4—5, and less frequently, 6 pups were found; which, as we shall see, corresponds to the number of the teats on each side of the bitch. The increase in the number of the pups is no doubt, even as the greater frequency of the periods of heat, the result of domestication. This is an inheritable attempt of Nature, who, when her existence seems to be threatened through removal into other conditions of life, compensates the species by increasing their fertility.

This superfluity of blessings, which a bitch sometimes brings, must be discarded. It is indeed difficult to exercise a right choice from the newly born pups. There is nothing, or very little to be prophesied about their future body-build. Only "fools" are able to pick out with unerring certainty the most promising of the litter, and to decide which of them will have thick heads, and other faults. Careful breeders therefore will only envy them for their "gift of the gab". The assertion that the mother puts back first into the nest the "best one" of the litter that has been taken out is also, unfortunately, nothing but a fairy tale too. She takes the "first best", that is to say the most convenient. As to which is the best, the breeder and the mother often have very diverse views. When, however, the bitch seeks among the miserably whining crew for the pup which has been taken out of the nest, smells one and takes another in her mouth; that is only the expression of wonder over the fact that a minute ago all the pups were safe and secure in the nest, and perhaps even hanging on to her, while the next minute they are outside at the mercy of foe, wind and weather. She must therefore first find out what is the matter, and then decide whether all her children are there, — for which purpose she smells each one, — and then ponder what is best to be done. If she comes to the conclusion that it is better to bring the little ones once more into the warm nest, than to curl herself up in the place where they are laid out, — some bitches will even do this, — and if while in the carrying out of this decision, and one of the pups is taken up, there is perhaps an especially piercing yowl uttered, on the other side, the startled mother lets go the one she had already seized, and goes to the one who yelped last. In the case of some bitches, a somewhat longer time elapses before they come to a decision; others behave more quietly, and more deliberately; which is due to a difference in temperament. Generally, and I wish to say this once more, the mother is not to be present when the superfluous pups are picked out and killed.

In choosing out the pups that have to be taken away, it is necessary at first only to remove all weaklings, and such pups which exhibit any kind of malformation; and then later on, the question of sex may be taken into consideration. It would be short-sighted to allow only dogs to remain and to take away a strong bitch to save a weak dog. *We can only maintain the high level of our race by means of the bitches.* To take these away from the best litters, and then later on to use inferior blood for propagating the breed, I call ruining the prospects of the future.

The chief reason for the preference for dogs may perhaps be found in this, that to many novices and to dog-lovers who know nothing about breeding the keeping of a bitch appears to be a nuisance. They wish to avoid the necessity for careful oversight during the period of heat, and know nothing of the greater reliability, fidelity, and submission of the bitch. The genuine breeder, however, works not only for the market, but also for the good of the breed. The market too can be educated up to this, quite apart from the consideration that the ever-increasing demand for service dogs is always more eager for bitches on account of their greater reliability.

When the choice has been made and the place put in order, the surviving pups are to be put back once more in the litter box. The pups to be destroyed must be taken away from the litter room without the mother noticing it. She can then be allowed to return to the litter. The pups to be destroyed can best be got rid of by throwing them down on to the stones, or by dashing them against a wall.

Experience shows us that the bringing up of superfluous pups on the bottle must be discountenanced. They demand a disproportionate amount of time, patience, and readiness to make sacrifices, and it finally ends in failure. The same holds true of the so-called artificial nurses. They can give warmth and nourishment, but never in right proportions; hence their chief qualification for their task is lacking, which is the solicitude of the careful mother who gently and unremittingly licks the under-part of her pups to ensure regular "motions", cleans them and keeps them dry.

If another bitch is sought out to serve as a nurse for an especially valuable breed; care must be taken that the nurse shall have whelped, if possible, about the same time as the mother; because the constitution of the milk of bitches is not always the same. The first milk given after the birth of the litter, the "beestings" (Kolostrum) is vitally necessary for the well-being of the new-born pups; later on too, the composition of the mother's milk is exactly adapted to the age and the development of the young. Not every bitch will receive strange pups without further ado. The nurse must be taken into the house, and be thoroughly habituated before she whelps. Before the strange pups are brought to the nest, — which can be done the second or the third day after birth, — the nurse must be taken away from her own litter; then the necessary number of pups are taken away from the nurse, and the pups which are to be put out to nurse are laid with the remainder. If possible, the nurse should be

kept away a long time from the nest; so that the strange pups may assimilate the smell of the nest. It is also advisable to rub the foster-pups and the pups of the nurse with spirit before allowing the nurse to return again to the nest, so that all may smell alike. Even so, this



Fig. 304. Mother with litter.

advice shows a lack of appreciation of the sensitiveness of the mother's power of smell. If the nurse feels at home in the house, it is better to impregnate the strange pups with the scent of the owner by means of sweat and spittle. She will then recognise all the more readily the

property of her master. If the bitch has once suckled and licked the strange pups, one can safely leave them with her. If, however, she refuses to accept them at once, it is no use waiting; for if she does not proceed at once to revenge the death of her own children by killing the foster-pups, at the very latest she will do it as soon as she is left alone with them. I have generally found shepherd dog bitches to be very bad nurses; they possess instincts that as yet are unspoiled; races whose *primaeva* instincts have become blunted are more suitable for the service of a nurse.

On the other hand, shepherd dog bitches are nearly always thoroughly good and most devoted mothers. That occasionally a mother is to be met with who, in the case of her first litter, through awkwardness and irritation with the after-birth and the navel cord will even gobble up her pups may happen everywhere, not only in the dog family, and this is due to a momentary aberration. To the shallow observer, it seems on the contrary, that some shepherd dog bitches are bad mothers. They turn certain pups out of the nest; they carry them out of the nest, they always set them outside the nest when the breeder has again put them in the nest; and will indeed kill them. We shall never be able to decide with any certainty what happens in the dog's soul to produce this. It cannot be the unnatural tendencies of some human beings who prefer pleasure, their own way, beauty, and the elegance of their figures etc; neither is it due to pain in the teats, nor to a diminishing in the secretion of the milk, nor the consciousness that the milk is not sufficient for so many pups. In my opinion, such bitches must have a very sensitive premonition of the failing vitality of the pup in question, — for it is always a question of the rejection of the same one, — of a coming illness, and the certainty of its death. My Mira, who was crazy about children and an extraordinarily good mother, used to do this with different litters. Once I was able to place the rejected pup of another bitch with her, and she accepted it willingly; but he did not thrive like the other pups of this bitch, but became constantly weaker and died in a fortnight.

The bitch must be exclusively fed on milk and water gruel for the first two or three days after the birth of the litter. If the birth occurred without any feverish symptoms, she may be gradually put back to a similar diet to what she had during the period of pregnancy. The number of meals should be increased to four or five. A sudden change of diet is to be avoided; it can lead to indigestion in the mother, which will be conveyed to the pups through the milk, and can cause them to be ill and to die. Clean water, not too cold, must always be at her disposal.

The bitch shows signs of a slimy discharge from the vagina during the first days after the birth. This discharge (the *Lochial*), which is the result of her confinement, does not require any special treatment; if however it lasts for a somewhat longer time, for several weeks, it is advisable to consult the veterinary surgeon. The mother must have moderate exercise every day to prevent constipation. Drastic remedies for the opening of the bowels are to be avoided, for

they are conveyed further by means of the milk, — even castor oil in this respect may be dangerous, — the best remedy is an enema with soapy water. The state of the teats must be examined daily so that any disease or damage may be remedied at once.

In the dog family, — the dog too shows the rudiments of teats, — the bitch, as a rule, has five pairs of teats, of which two are on the chest two are on the stomach, and one pair in the pubic region. The first pair on the breast have the least development, they are sometimes wanting altogether, and give the least quantity of milk. This also gives us an indication that the highest number of pups that ought to be left with a bitch is between four and five. According to Hauck, 60% have 10; 30% have 9; and 10% have only 8 teats. Those that have 9 are said to lack the first belly teat on the off side. Hauck reckons then for the arrangement of the teats the following:

$$\frac{\text{left. } 1, 2, 3, 4, 5}{\text{right } 1, 2, 3, 4, 5} = 10, \text{ or } \frac{\text{left. } 1, 2, 3, 4, 5}{\text{right } -, 2, 3, 4, 5} = 9$$

for the more certain estimation of the value of a bitch, and an identification mark which should be entered in the Stud Book.

The milk of the bitch, which always has an acid reaction, is very rich in its contents; I give in the following table its composition as compared with cows' and goats' milk.

	Bitches' milk	Cows' milk	Goats' milk
Water	77 %	88 %	87 %
Solids	23 %	12 %	13 %
Albumen	9.7 %	3.3 %	3.7 %
Fat	9.2 %	3.7 %	4.0 %
Sugar	3.1 %	6.3 %	4.4 %
Salts	0.9 %	0.3 %	0.8 %
Potassium	13.0 %	24.0 %	24.3 %
Sodium Carbonate . . .	5.3 %	6.5 %	4.5 %
Calcium	33.4 %	23.2 %	31.1 %
Magnesium	1.6 %	2.6 %	1.4 %
Ferric Oxide	0.1 %	0.4 %	1.0 %
Phosphoric Acid	36.0 %	27.5 %	30.2 %
Chlorine	13.0 %	13.6 %	7.6 %

We can see from the foregoing that for the pups there can be no adequate substitute for their mothers' milk. Although it could be compensated for by large quantities of other milk, which, however, might lead to an overloading of the stomach and digestion, the results, on the other hand, could never be attained with regard to the percentage of Salts by cow's milk; and not very satisfactorily in the case of goat's milk, although the latter must be preferred in every case. The high percentage of lime and phosphorus in the milk of the bitch are especially instructive for the breeder who wishes to feed his animals suitably.

At first the pups make no very great demands on the breeder. They must, of course, be sufficiently watched every day, so that a careful notice can be taken that the navel wound is always clean, so that it may heal satisfactorily. Treatment with boracic ointment will help to hasten the healing of this part.

During the first week after the birth of the litter, special attention must be paid, to the possibility of any skin disease, which generally appears on the toes, the soles of the feet, on the stomach, but especially in the region of the navel, extending even to the tip of the nose. Ulcers and rashes occur frequently, and can lead to loss of the claws, but they quickly yield, as a rule, to treatment. Hauck considers that the drenching of the litter box with the waters of parturition is responsible for this inflammation, which is a further reason for first allowing the mother to lie on the bare floor of the litter box, and then later on strewing it over with straw.

The pups are blind at birth, that is to say the eyelids are still closed. They open between the ninth and the twelfth days. The darker the room in which the pups are kept, the later will this be. The place should not be in the full broad daylight, so as to avoid diseases of the eye.

Dew claws, which always appear on some pups in a litter, are best removed on the fourth or the fifth day, not later. This can be effected by a quick snip of a pair of sharp somewhat curved scissors. To do this, the pup is taken in the hand, the hind-quarters are held fast; the protruding claw is held up so that the scissors may have a good under-grip. Both feet and scissors, naturally must be cleansed with a sterilising liquid; and the small, scarcely bleeding wound can be sprinkled with something to staunch the bleeding (Tannoform or Dermatol). The earlier the operation is performed, the easier it is. With older pups and young dogs, the wound is accordingly greater and the excision is not always so easy. Instead of cutting, the dew-claws can be ligatured in the fifth week. In order to properly eradicate the claw from the leg, a noose must be made of strong undyed silk, (preferably silk used for the sewing up of wounds); this must be tightly drawn over the claw. This is also to be repeated after a few days. The claw will, at first, swell considerably; then die and drop off of itself. It must not be forgotten to clean the wound.



Fig. 305. Litter three days old.

The appearance of the milk-teeth begins in the middle of the second or the beginning of the third week; and they generally have come through completely at the beginning of the fifth week. During the period of teething the pups are especially delicate.

The appearance of the milk teeth shows the breeder that he may begin to feed the pups. In this respect too, in the present circumstances, we are hard put to it. Formerly,



Fig. 306. Pup three weeks old.

I used to advise that this should be begun at the commencement of the fourth week, and in some cases even earlier, and that the pups should be given their first food from finely chopped meat. None will refuse it, and it is easily digested, while milk is conducive to stomach trouble. With this first food, after a few days, I allow some Phosphor-cod-liver oil puppy food, mixed with meat broth to be given; this is used at first in powder form, and afterwards in larger grains so as to excite the desire to use the teeth. The number of meals is then increased; until, at the beginning of the sixth week, they are raised to six; and so pro-



Fig. 307. Pup five weeks old.

vision is made for the needs of the pups by day, while the mother is only responsible for them at night. If too, the quantity of meat required by the pups is small, for all that, meat is not always to be obtained. At anyrate, we are not able to pick and choose as formerly. We can no longer confine ourselves to the good ox or veal brawn, but we must also fall back on the horse, whose flesh was disdained in

former times, during the period of weaning. Now, however, we must take a piece wherever we can get it and, for "needs must when the



Fig. 308. Pup six weeks old.

devil drives", make it edible by cooking. As a substitute for "Puppy-food", of which we must be deprived for a long time to come, we must



Fig. 309. Pup six weeks old.

use oatmeal, rolled oats, and coarsely ground oats. To-day, for the same purpose, we must use the crusts of stale bread, so as to make the pups chew, and allow them to nibble at large fresh bones, while bone-meal and nutritive salts must not be forgotten, as a regular additional course. Bone-meal is best obtained from fresh marrow bones. Before being given as a food, it should be boiled to a thick pap, while the bones must be newly ground before every meal in the bone mill.

Generally too, we must also avail ourselves to the full of the mother's milk, and use the natural source for the pups as long as it lasts. For this purpose, we must then take proper care of the mother. She must be very carefully, and very plentifully fed; but it is



Fig. 310. Pup seven weeks old.

a sine quâ non that the number of pups be restricted, because otherwise two or three pups of eight weeks old will be much more of a drain on the mother than six or more younger pups. Some mothers begin, in the time of weaning, when they feel that their milk is giving out, or when the pups harass them too much with teeth and claws, to vomit up half-digested food for them. If the bitch is well fed and carefully looked after, (so that she cannot get at all kinds of food that may perhaps may not hurt her, but may be injurious for the pups, such as street refuse and bones), there is nothing to be said for it. This is not disgusting, it is only the natural way of the wild dog in caring for its young.

The mother must not remain with the litter continually, and from the very first days, (at first for a short time, but later on for a longer period), she must be taken away from the litter kennel for exercise. When the pups begin to make expeditions of exploration outside the kennel, the mother must also be fed outside the kennel as well. During the time of weaning, the intervals during which the mother is taken away from the litter must be made increasingly longer, and food can always be given to the pups before the mother is allowed to come back to them again. Finally, the mother only comes at nights to the litter, her meals are also restricted, and she must be thoroughly exercised during the day. She will then at this time only allow the



Fig. 311. Pup eight weeks old.

pups, who will have grown considerably, to come to the teats under protest, because they cause her considerable pain with their biting and treading. If then she is kept away from the pups for a few days and nights, the milk quickly disappears. The teats are then to be thoroughly bathed with cold water mixed in equal quantities with vinegar; wounded places require very careful attention, and must be smeared with boracic ointment. If the bitch is then once more allowed to go back to the litter she will snap at those who wish to drink, of her own accord; the habit of sucking is thus broken, and the pups are at last independent.

During weaning in the manner described, I have had most satisfactory results with meat and puppy food only, and above all,

I have been able to avoid attacks of stomach troubles and diarrhea, which generally are frequent at this time and which also are the opportunities for germs which convey distemper. I will speak at greater length of this and other puppy ailments in the next chapter. If milk is given to the pups, naturally unskimmed milk, fresh from the cow is the best; but in order to make it more digestible, a good pinch of kitchen salt can be added to a quart of milk. Goats' milk is taken with even greater relish than cows' milk, it is also more nourishing; but the pups will often become so fond of it that they will take nothing else. This milk diet must be given in moderation even when it can be supplied plentifully, because this is less nourishing than the milk of the mother, and must therefore be taken in greater quantities to be taken sufficiently. The pups pump themselves up and blow out their stomachs with it and often refuse better and more strengthening food; and yet the little rascals, with tummies like billiard



Fig. 312. "Mother's back again".

balls, remain weak and spongy for all their tippling. We are not out to breed fatted calves, but firm, wiry shepherd dogs; that is the reason why, when the pups have once been weaned, dry strengthening food is more suitable and natural than slobbering messes.

It goes without saying that the food must be prepared fresh each time; stale sour food only leads to stomach troubles. The feeding dish is to be taken away after each meal, and must not be left lying, out of slackness. The pups should eat enough, and then have time to digest their food, so that they will be hungry by their next meal time; which is not the case when at any moment they can go and snap up a tit-bit. To keep the feeding dish most scrupulously clean, and above all the whole kennel spotless, is a further indispensable condition for healthy bringing up. Where there is dirt and disorder, there will the pups be ruined. The mother only attends to their cleanliness and to the removal of the dung, so long as she suckles them. Later on, she lets

the dung lie. The breeder must also keep the litter box clean, and the kennel, and must also industriously renew the straw whenever required. Clean water should always be handy, but during attacks of diarrhea, camomile tea or acorn cocoa are to be substituted.

A careful breeder must watch his pups when they feed, —if his wife will not relieve him of this duty. When some eat sparingly, this is often the result of teething; such pups can afterwards be supplied with soft nourishing food. To facilitate teething, the pups should always have large fresh bones and wooden balls to play with and gnaw. The same careful attention that is paid to their eating should also be directed to see that the pups are regular in their "evacuations", for these certainly have a great influence on the state of their health. They are satisfactory if they take the form of little sausages, they must be neither hard nor bullety; they should never be thick nor pulp-like; and above all never liquid.



Fig. 313. Pups at play.

In teething times or during illness, they can be helped by being given an egg beaten up with sugar, cod liver oil, tropon, somatose or any other strengthening remedy. The breeder should not trouble himself for any length of time with pups that are physically weak, but kill them as painlessly and as quickly as possible; for his skill should not consist in the successful rearing of delicate little crocks, but in the upbringing of vigorous young shepherd dog stock. If a breeder perceives that his litter is becoming less lively, he should not treat them himself with any quack remedy, but should consult the veterinary surgeon as soon as possible.

As soon as the growing pups are capable of taking any exercise, they are impatient to leave the nest. The most daring risk the experiment, tumble, climb and fall out. It is true at first that they will soon cry out for mother, but the groggy little legs become stronger, and the desire for enterprise becomes greater. If the pups have advanced

so far, there is nothing better, nor more strengthening than to live in the open air. It is now only necessary to protect them from damp underfoot, from rain, and from excessive heat of the sun. If this can be secured, then turn them out by all means, at all seasons and in all weathers. A place, however, must be provided where they play, so that those who are soon tired may not catch a chill by lying on the cold or damp ground; a place with peat dust laid on wooden lathes is sufficient.

I have often been asked for the scale of weight for pups. To wish to draw conclusions as to their quality and health from their weight is a very uncertain thing, for it always varies, and depends on whether the little rascals, in question are weighed empty, or with a packed tummy. The weight of a new-born pup depends alike on the number of pups in the litter, and the duration of the period of pregnancy. The more whelps the mother must carry, and the earlier she gives birth to them, with all the smaller nourishment will the pups come into the world. The average weight can be computed at from 15 ozs to one pound, a weight which the pups will double in the first nine days. I have reckoned the average weight week by week of eight litters consisting of forty two pups — the least numerous litter was four and the most numerous seven pups — in the last ten years; and I give the results in the following table with the highest and the lowest weights for the respective weeks:

At the end of each week	Average weight] in lbs. ozs.	Highest weight lbs. ozs.	Lowest weight lbs. ozs.
1st.	1 13	2 5	1 3
2nd.	3 5	5 5	2 0
3rd.	4 10	6 4	2 12
4th.	5 15	7 13	3 10
5th.	7 15	10 9	4 5
6th.	9 11	12 4	5 9
7th.	11 15	15 1	6 11
8th.	14 7	18 8	8 0

The peculiarity about this Table is that the highest averages are not for the same pups, nor even from the same litter, but changes about from one to the other. The lightest weight, on the other hand, remained from the commencement with the same pup. When we exclude this little misery, we arrive from the end of the first week to the end of the eighth week to an average weight of about 2 lbs. 1 ozs., 3 lbs. 7 ozs., 4 lbs. 14 ozs., 6 lbs. 12 ozs., 8 lbs 4 ozs., 10 lbs., 12 lbs. 2 ozs., 14 lbs., 11 ozs., or an average weekly increase of weight in this time (on the above-mentioned weight at birth) of about 14 ozs., 1 lb., 9 ozs., 1 lb. 5 ozs., 2 lbs., 1 lbs. 7 ozs., 2 lbs. 1 ozs., and 2 lbs. 9 ozs.

The fall back in the third, and again in the fifth week can be attributed to teething, and then to the beginning of weaning. From that time onward, the average rises regularly.

Finally we must be concerned in this Chapter not only with the physical development in the early breeding of the puppy, but also

with his soul, with its spiritual characteristics at the commencement of his education and leading towards the upward grade. According to Pryor, the soul of the new-born is to be compared, not to a blank page, but to a slate which bears the traces of inscriptions and innumerable impressions recorded there from long lines of the family in the past. I would like to recall what was said in a former Chapter about the value of the foundation of the history of development for the development of the mental activity. The parents have together handed on, to the pups in the inheritable mass, as a permanent but latent basis, what they themselves have lived out and experienced. This inheritance lies certainly in subconsciousness, but it is awakened through certain experiences of the senses; and is thus brought to the surface and realised in activity. I would also further recall what was said above about the inherited nasal activity of the dog as compared with the scenting powers of the wolf. Such examples can be quoted in numerous instances from the first seeking out of the breast of the mother by means of the nose, till we come to the joyful nose-service of the young shepherd dog which comes into activity when in contact with the sheep. We also have examples of various kinds of service, in their beginnings, in the cases of wild dogs and young domestic dogs. The pups of the wild dog cower silent in the nest when steps approach so as not to betray themselves, — I noticed the same in the litter of a bitch in Serbia who became half-wild through the War, who had made her confinement bed in a shell ridden house, — but the pups on the other hand gave tongue. The mother is the first instructress of the litter; I accordingly lay great stress on the bad influence exercised by a shy bitch. The intelligent breeder, however, can already take a hand in directing the earlier and the later training. The most important consideration of all is that the love for, and the trust of man need not be awakened in the nestlings — they already inherit this, as every breeder knows, who can scarcely avoid them as they crowd around him, — but he must consolidate and develop it. A careful, loving treatment of the young pups, helping to make permanent their belief in the goodness of man in general, and of their master in particular, is necessary. Children are only too prone to tease them; and although it is generally out of pure love, it is not good to leave nestlings and even older pups, with children; until they are first able to defend themselves against, and requite a love that may become embarrassing. In bringing up, the greatest attention must be paid to cleanliness and to regularity in meals. If the growing pups, having thoroughly slept after the last meal, are fetched out of the litter box at the right time and led to an attractive place, they will soon become accustomed to make their "evacuations" there, and there alone; and this will be helped by meals at regular times. In the same way, the pups may be accustomed to take their meals only out of at certain particular dishes, which, when the meal is finished, are to be taken away. Thus we can train a dog to be punctual at meals, but if we leave dishes or scraps of food about, we only encourage daintiness and stealing.

The breeder of a dog is, according to the rules of German dog-breeding, the owner of the mother at the time of copulation. At the sale of a bitch which has copulated, the rights of the breeder, by contract, can be transferred to the purchaser, but notice of this must be given in writing to the keepers of the Stud Book at least a fortnight before the birth of the litter, by registered letter. A strange bitch can also, by special arrangement, be hired out at a special time for breeding purposes; the person hiring the bitch counts as a breeder, and in this case, must notify the keepers of the Stud Book. These regulations are important, because considerable advantages are thereby secured to dog-breeding, especially in Exhibitions and Police or Field or other trials, where high distinctions are held out as inducements to the breeder.

Every breeder must note down carefully in a special book all that occurs in his kennel so as to be able to furnish information in reply to the official enquiries of the Wardens of the Breed, and the officials in charge of the Stud Book, but for his own sake too he will record all the important data which will be of benefit not only to him personally but to the whole Science of Breeding. For this purpose it is best to have a special kennel book, containing special headings and reference columns*.

Furthermore, every breeder, who naturally will breed only with animals recorded in the Stud Book, will see that all his breeding results are entered in the Zuchtbuch für deutsche Schäferhunde (Stud Book for the German Shepherd dog) SZ published for this purpose; and will also give information about the litters as soon as they are eight weeks old**. The SV has included information about litters for the last twenty years at the suggestion of the late Herr Meyer, with the idea of making the Stud Book as complete as possible, and to-day practically all the other dog-breeding Associations in Germany have followed our example. *For, as we have seen, suitable breeding is only possible, where there is an absolutely complete knowledge of the blood strains and the service capacity of the parents. The Stud Book supplies both this, and a complete list of service dogs, which serve as the foundation of the breed ***.*

Purposeful breeding in accordance with the Stud Book is something comparatively new, but not only in the case of dogs. In the beginning of the 19th century the "General Stud Book" was first produced for full blood horses, and in 1874, the English Kennel Club, which had been founded two years before, and which was the

* There is a special Zwingerbuch (Kennel Book) compiled by Rittmeister von Stephanitz.

** Zuchtbuch für deutsche Schäferhunde, (The German Shepherd dog Stud Book, Vols. 1—17, published by the Zuchtbuchamt des SV. (The Stud Book Office of the SV.)

*** Gebrauchshundlisten (list of service dogs) which are entered in the Stud Book as HGH, KrH, SH, Schh, Ph, published by the Stud Book Office of the SV. 1st Edition 1920.

first Society devoted to dog breeding, published the first volume of the Kennel Club Stud Book (KCSB). When Germany found time to be occupied with the dog, instruction was sought for from abroad. Following the English example, the newly formed "Verein zur Veredelung der Hunderassen in Deutschland" (The Society for the improvement of dog races in Germany), with Headquarters at Hanover, commenced to complete in 1878 its general "Deutsches Hundestammbuch" (German dog family Book), kept by the "Delegierten-Commission" (DC), which was the first Amalgamation of those Societies which interested themselves in the dog, and finally was taken over by them. The first volume appeared in 1879, since when a volume has appeared annually. "Family Book" means the same as Stud Book. The original was known in England as the "SB", and the German signification and abbreviations were made in imitation. "Stud Book" means Book for the Stud, the Herd, the breeding Family, or the Breeding Book. "STUD BOOK" is the correct title, and its aim is to give credible information about the breed and no more. The general public, not interested in Breeding, however, understands something totally different by it. The "Family Book" is a memorandum book in which our mothers and sisters — though now it has gone out of fashion — recorded the existence of dear and true friendships of their time.

The DHSB was, as already said, generally for all races, and contained only the few dogs who were conspicuous at Exhibitions, or whose "rare-purity" was thoroughly vouched for by official opinion. All this, however, could not, as said before, be determined from external characteristics, but only on information as to the family. The demand that only Exhibition qualifications should be considered would have placed the breed on too narrow a basis, and because this really depends on all kinds of contingencies, it accordingly gave quite a false impression; i. e. a picture of the *crème de la crème* of the race only. The first Breeding books of our race, which, in the nineties of the preceeding century were published apart from the DHSB, adhered to the same method of entering particulars; the SV, however, broke with the old traditions, when it published its Stud Book in 1900 and laid down the regulations for its use*. *The SV ruled that, next to the duty of proving the origin of the dogs entered in the Stud Book, the names of all existing shepherd dogs should be entered to make the Book as complete as possible.* The Stud Book was to be no longer a chance book for the recording of certain chosen dogs, but it should be a complete book of reference for the breeder, (from the examples it gives and from the Family Table), and information about the blood strains and the service qualifications of the individual dogs. Hence there is the list of service dogs which says all that there is to be

* Der Verein für deutsche Schäferhunde (SV) sein Ziel und seine Verfassung, (The Society for the German dog, its aim and its Constitution) by Rittmeister von Stephanitz 18th Edition, 1921.

said of them and forms an indispensable supplement to the Stud Book. The Stud Book, also, when rightly used, can give some explanation of the particular value to the breed of the progeny of certain animals and blood strains, as said above, by means of the Judges' reports and lists of Honours published in the SV-Zeitung (Journal), and by means of the Kennel News also found there, even as the Stud Book itself should serve for this investigation of breeds. The following questions, for instance should also be dealt with: — the duration of the period of pregnancy, the number of pups in a litter, and the proportion of the sexes, the proportion of the sexes in different litters of bitches which copulated at the beginning and at the end of the period of heat, (for this, additional enquiries would have to be made from the breeders), the difference in age of the parents, and the relation between the age of the parents, the strength and the proportion of the sexes in the litter, (to be ascertained by means of the help of the Stud Book), and finally, the attempt to determine the proportion of the sexes in litters which are progeny of dogs who are frequently and constantly sought after for breeding. There is an absolutely profitable and attractive field of work and voluntary study in leisure hours, which, when fixed on a broad foundation, will be useful to animal breeding as a whole.

As all entries in the Stud Book are made in good faith, this demands the utmost care and reliability in the breeders' reports, for such reports form the foundation of the Stud Book. This obligation also includes the necessity for fining neglect and carelessness, and further, the non-recognition of entries in another Stud Book, because such entries would facilitate confusions, shufflings and mystifyings. Both rules are nothing else but a means of self-protection taken by a breeding Society to guard the interests of the breed which it represents. The condition that one Stud Book only should be used for the one race is obvious. We, however, live in Germany, the land of self-willed individualists, and therefore it is further obvious that along with every small and new Society which is anywhere founded by disgruntled or expelled members of the SV, the formation of its own Stud Book will be one of its first official acts. This is done, not to secure the larger interests of the shepherd dog race as a whole, but to bring any little achievement of its members into the limelight and to put the "big brother" in the shade.

Thus, even in connection with shepherd dog breeding, a few little books eke out a precarious existence, that with a few paltry entries scarcely ever come to public knowledge. They are useful to no one, and all they accomplish in the end is to facilitate for dealers the congenial task of leading novices by the nose.

That in our Stud Book the of names of certain dogs "sans famille" can be entered, or dogs on whose origin no breeder can throw any light is certainly an anomaly. The shepherd dog breed, however, cannot be cut off from the original source of their race, the herdsman's dogs. Valuable service blood, whether it be from herds-

man's or from service dogs must be utilised for the breed, and accordingly there must be an official place, where a beginning can be made to fix it by making official entries. For the careful breeder, the warning "origin unknown" will be sufficient; he will have recourse to such animals only when he has a certain end in view, and can justify such a proceeding by the thought of the welfare of the race.

It must be admitted that the authorities in charge of the Stud Book do not demand an unimpeachable guarantee that another dog has not been substituted later on by dishonourable means for a certain dog whose name has been entered in the Book; and the description of the hair and colour do not meet the case. On farms in animal breeding, they employ branding, tattooing, ear-marking and suchlike signs to distinguish their animals. Herr Kestermann, one of the late directors of our Stud Book, who developed the usefulness of the SV Stud Book to a very high state of completeness, had advised a similar method of identifying our dogs as well. The difficulty existing up to now of placing these markings soon after the allotting of a Stud Book number, will no doubt be overcome in the future development of the SV by means of official Breeding Wardens, who would thus take up yet another work for the benefit of the breed. The chief difficulty at present consists in the lack of a means of establishing identification. Branding is impossible for our dogs because of the rapid growth of the hair over the place. The only possible place would be the under surface of the upper part of the thigh; but it is a question whether a permanent injury might not be done to a very young dog, and also whether the branding would last when the dog is full grown. A small imperceptible ear-marking in the outer fold of the ear would be the best means for races with pendulous ears, but would not be harmless for the erect eared shepherd dog, because it might exercise an influence on the carriage of the ears. Another place for such a mark may perhaps be the corner of the lip, on the under lip, but in this respect some thorough experiments must be made. They could perhaps be made on service dogs, for whom the indelible official sign might prove a guarantee of usefulness. There remains now tattooing, which is also only possible on the inner side of the upper part of the thigh. The Police dogs at Liège were marked in this way, but the tattooing was not permanent; quite possibly this was the fault of the substitute colour used at this time, because otherwise such tattooings have often been proved, to the great regret of the wearer, as ineradicable and as reliable as a portrait in the "Rogues' Gallery". Tattooing seems to me, at all events, to be the only promising method of permanent identification.

Before being entered in the Stud Book, every pup must have a name. Every dog will have two names. In addition to his own name, he will have the name of his Kennel. The one corresponds to the Christian name, and the other to the surname, and serves a similar purpose to the family name, to distinguish the different clans from each other. Those who wish can regard the Kennel name as a kind

of hall mark or trade mark; for it is secured to the breeder for life. Once given, the name, and the kennel name of a dog must never be changed, not even with official permission*. In public the dog must always be described by his full name, together with his Stud Book number, with his various titles of honour and signs of qualification: for instance, Worad von Berka SZ No. 59381 HGH, Preishütersieger (Prize Tending Champion) of 1919. In the house, however, everyone naturally wishes to call his dog as he chooses, and as is most convenient for calling, that is to say, by a pet or short name, which naturally is not entered in the Stud Book, and which is not given in public descriptions, as for instance, "Worad, known in the bosom of his family as "Spätzle".

The choice of the dog's name and kennel name is left entirely to the breeder, with this limitation, that names or combinations of names that have already been entered in the Stud Book cannot be used again. Names too which are not suitable e. g. the names of noble families are not allowed.

Kennel names are usually connected with the name of the place, sometimes with some family event, or achievement, a characteristic, or a proper name, or something that takes the place of it.

There are some Kennel names which must be prefixed, and some which must be written after the dog's name. Motives of usefulness can also have weight in the choice of names, but there is not a very large choice of names which can be used as Kennel prefixes. It is easier and more popular to write the Kennel name after the name. At anyrate, the breeder should choose as short a name as possible. After he has been obliged to spend a long time writing it out a few dozen times, he will soon know the reason why.

A good name should be easy to speak, and pleasant to hear; it must therefore be short, sharp and harmonious. All names that have been entered do not entirely fulfill these conditions, because an industrious breeder in the course of time uses a considerable number of names. The greatest possible variety is desired in the names of the Stud Book so that the Table of Contents should not show hundreds or thousands of similar sounding names, among which the name with the desired kennel name must be sought. If the name entered is not a good name, the keeper helps himself, and calls his dog with a better suited nickname; it is all the same to the dog. To secure this it is best to have a short tuneful syllable, which is itself a vowel; the

* Formerly, changing of names was not infrequent, and took place at nearly every change of the Kennel. In the older volumes of the Stud Book accordingly, one can frequently find dogs with double names, whose names were changed and changed again. The SV, however, has absolutely done away with this bad habit of many dog lovers, which indeed was founded on natural reasons, but which opened the way to fraud. Further, with the growth of the breed it made careful keeping and searching of the Stud Book impossible; and most of all, robbed the breeder of the honour that was only due to him that a dog should always bear the name of his breeder.

accenting of which will serve as a command; while, for the sake of petting and playing, an affectionate ending can be tacked on.

It is helpful, when the names of one litter all begin with the same letter, to choose another letter for the next litter and so on. It is not necessary to begin with the letter "A" and to keep strictly to the Alphabetical order of the letters, — on the contrary, — just think of what this would mean for the Table of Contents of the Stud Book if only the principle is observed.

Our shepherds are always glad to find a connection between the vocation and the home in the names of their dogs; thus we find Bello (a combination of "bellen" = to "bark" with the Old German termination "O", which unfortunately has been given a feminine form in very bad German as Bellina, and sometimes as Bella, which, however, has no connection with the Latin), Bieder (True), Blitz (Lightning), Blume (Flower), Brav (Fine), Bub (Boy), Bubi (Little Fellow), Bursche (Fellow), Bürschl (Young Fellow), Dirndl (Lassie), Drauf (On it), Dreist (Bold), Ehrlich (Honest), Fleiss (Industrious), Flink (Quick), Flott (Quick), Frei (Free), Freund (Friend), Freunlich (Friendly), Frisch (Hearty), Froh (Joyful), Fröhlich (Joyful), Fromm (Good), Funke (Spark), Furchentramper (Furrow Walker), Glanz (Splendour), Glast (Glossy), Glück (Luck), Greif (Grip), Grenz (Border), Grimm (Grim), Heiter (Cheery), Hilf (Help), Hilfe (Help), Hold (Devoted), Hör (Hearer), Horch (Listener), Hurtig (Brisk), Kampf (Fight), Keck (Bold), Kühn (Daring), Kunimbimeck (Come to me), Lustig (Merry), Mädel (Girl), Mädi (Little maid), Marsch (March), Munter (Bright), Passauf (Look out), Quick (Lively), Racher (Rascal), Raps (Rape), Schlau (Clever), Schmuck (Beauty), Schnapp (Snap), Schnell (Quick), Schnipp (Snip), Schnuck (Dear), Sieg (Victor), Stark (Strong), Stern (Star), Stolz (Proud), Treu (True), Treue (True), Trütz (Safe), Wacker (good), Wicht (Nipper), Wietu (Oh you), Wille (Will), Wörro (Guardian), Wunsch (Wish), Zorn (Rage). Falke (Falcon), Maus (Mouse), Wachtel (Quail), and Wiesel (Weasel) are easily understood in relation to the desired agility in the service dog. Bär (Bear), Petz (Bruin), Luchs (Lynx), and Wolf (Wolf), on the contrary, indicate the former service of the flock protector. Wolf can also refer to colour, Fuchs (fox) does so certainly, as well as Mohr (Moor), Neger (Nigger), Scheck (Dappled), Schimmel (Grey), Schwarzkopf (Black head), and finally Tiger (Tiger), "Russ" is found more often in Southern Germany for "rough or short haired dogs," Stumper" (Stumpy Tail) and Matz (Bitch) for bitches. There is also the choice, (according to the good old German custom), of trees, and waters as god-parents. Dogs who bore the names of certain waters were, according to the belief of our forebears, protected against the evil influences of the spirits of the earth, and according to the belief of some present day shepherds, at least in the East, a dog so called is a protection for the herd against the possibility of fire. We have therefore Birke (Beech tree), which can be recognised from the silver grey colour, Buche (Beech), Eiche (Oak), Erle (Alder), Fichte (Fir), Tanne (Pine), Then

Fliess (Stream), Strom (River), Wasser (Water), Elbe (the Elbe), Leine (the Leine), Mulde (the Mulde), Saale (the Saale), Selke (the Selke), Werra (the Werra), Weser (the Weser), and in the South, Donau (Danube), and the Neckar (Neckar), which is often corrupted into Neeker.



CHAPTER FOUR

BRINGING UP AND KEEPING.



“Nature creates the pups, the breeder makes the dog.”
Old Breeding Motto.

In the preceding Chapter we have accompanied the pups as far as their eighth week. Now comes the time when many anxieties await the breeder of a litter of pups; when the pups will worry him into baldness, and when the problem of accomodating them and keeping them well employed is even more accute; for the development in the coming weeks and months lays the foundation of the future dog. This will decide whether he will be a real shepherd dog as he was meant to be, or whether he will be a weakling, “the saftest in the family”, with a backbone of indiarubber, and the soul of a rabbit.

If, as is possible in the country, the pups can run free in the yard and in the house and rooms as well, and can be taken on the road and in the fields without incurring any risk, everything will be satisfactory for quite a long time. The litter then grows under the mother's

guidance and leadership, romps round with the children, the dog and the cat, learns to take notice of the other domestic animals, to have a respect for the rough men, and a mistrust of strangers, sees the watchfulness of the mother, and many other useful things, and so continues to grow in its learning and in enlarging its experience. At last, however, the time comes, at the latest at the fifth or the sixth month for these sound and naturally grown up dogs to be kept and brought up alone. If at this stage the external circumstances are changed as little as possible, all the better for their future, and for their mental development.

If the town breeder can obtain a fairly large exercising room for his pups where they can romp to their hearts' content, and, above all, can live a life not altogether separated from the world; if he can himself go in there every day and occupy himself with them, and can always take different pups to himself in the room; then and then only is it possible to keep the whole family together for a few weeks longer, and avoid the usual bad effects of confinement in a kennel, and the greater liability to infection withal. At the twelfth, or, at the very latest, the fifteenth week, even under these conditions, the litter should be separated for the sake of the future of the pups themselves.

Whoever is unable to do either of these, that is, either to keep his pups under strict conditions where possible in the house, or to occupy himself with them hours at a time daily, must give them up when they have become independent, by the eighth week and at the end of the tenth week at the very latest. At this age they are ready to be disposed of and are fit to travel. They are often in demand and are disposed of even when younger, at five or six weeks old, but an intelligent breeder will not do this; for he only damages his own reputation by disposing of such unfinished animals, who through change of keeping, surroundings and nourishment, are considerably debilitated, and are overwhelmed by the new influences which a stronger dog can bear without hurt to himself.

It is indeed often difficult for a careful breeder, who is keen on the improvement of his breeding stock, to part with his young animals, because he can foresee so little of their future development. Whoever wishes to keep the most promising of his bitch pups, and thoroughly understands that, even for the reasons mentioned, he cannot keep the entire litter together, seizes the best means of disposing the pups separately, and in suitable places for breeding. He is indeed to be congratulated, who can find an understanding and intelligent trainer, if possible in the neighbourhood, where he will often be able to visit his former pups. Boarding them out never finds favour, but it is an excellent thing in the breeding of dogs, when one can meet with the right guardian, because he avoids the evils of pup farming. After what I have just said, I need not repeat the fact that the best place for looking after them is the country. The countryman indeed has very little understanding of the worth of a dog, but those that are placed under his care will at least grow up under healthy and natural

conditions, and can develop themselves into powerful, proud and useful shepherd dogs. That, after all, is the chief consideration for the future of our breed, to which the breeder must subordinate all, even the not inconsiderable money value of his litters. Country sheep farmers, naturally those who do not lead itinerating flocks, small holders and settlers can be considered the best people with whom dogs may be boarded out; also country inn-keepers, butchers and country police. Among them, especially among the soldier-settlers, it will be possible to find many to-day, who have brought back with them as part of their war experience, a love and a certain amount of understanding of the dog, for his needs, and even partly too for his upbringing. It is necessary to arouse and keep strong their interest by means of talks on the importance of our breed, and by means also of advice and suitable remuneration. This can be increased by the prospect of future partnership and gain. Some breeders even board out two pups to be brought up, of which one, after a certain time will be the property of the man who brought them both up. Under such circumstances too, the conditions must be made in writing. Above all, adequate stipulations must be made with reference to the choice, and for the contingency in which one of the pups might die; in such an event it is generally arranged that the pup who first dies is to be regarded as the property of the man who boards the dogs, to whom a suitable but smaller remuneration must be paid for the further upbringing of the surviving dog. Pup farming as a business must naturally be avoided. Such places where many pups are looked after are breeding places for disease, and still worse than one's own kennel.

I now wish to occupy myself with the further development, and the finishing education of the independent pup till he becomes a young dog, and then till he graduates into the full grown shepherd dog. The puppy age lasts till about the end of the fourth month; then the time begins when he is a young dog, which, according to the former Regulations of Exhibitions is reckoned to last till the fifteenth month. It would be more correct to describe all dogs as such till the commencement of puberty, bitches till the beginning of the twentieth month, and dogs up to the end of the second year. Herr Rubner reckons the youthful period of the dog, that is the time which is necessary for the full development of all the outer and the inner parts, as lasting two years, and the average duration of a dog's life as eleven years. I know service dogs who were capable of working to a much greater age, till the fifteenth or the sixteenth year, and were even capable of breeding as well; generally however, the dog is quite used up at an earlier period and ready to die.

The man who rears a dog must complete what the breeder began; the breeder can indeed lay the foundations of a good and serviceable dog, but the trainer must see to it that he brings to their highest possible development the physical and mental foundations already laid, and thus his is the more gratifying task. But this is not easy if the pup is to become a good shepherd dog, hard and serviceable in body build, and completely educated in character, as I have described in Chapter 2.

I will, in this Chapter, only keep in view the physical development, while the mental education will be dealt with in Chapter 6. The pup must first of all grow; his skeleton must be formed, his muscles and ligaments must become taut and firm; the inner organs, the heart lungs and digestion must be kept strong and sound. The time of growing, by which must be understood more than the mere physical growing up, lasts at all events till the end of the second year. The period of growing up cannot be artificially influenced for the better from the point of view of the time taken in the process, though indeed it can be hindered through insufficient nourishment, in which case the animal will always remain a weakling. On this account, the need for food is all the greater in the time of youth, because the young animal is more lively, and this liveliness is a necessity, because exercise is imperative for the development of the body.

While during the first weeks the growth is small in comparison to the weight, a considerable extension takes place about the third or the fourth month; and lasts till the commencement of the developing time, and puberty, which is about the ninth month. The increase in size then is only inconsiderable; the yearling in this respect is nearly full grown, but the inner development and the external completion, that is the all-round growth is not finished by a long way; but has first reached its closing stages about the end of the second year.

Quite apart from these periods of life, the seasons of the year also exercise a considerable influence on the growth and the development. It has been ascertained in the case of children that they grow the fastest between April and July; from August to November this is not so noticeable, and it is the least remarkable of all in the winter months, from December to March. The most favourable time for putting on weight is from the beginning of August to the end of November; from then till March, there is an appreciable falling off; while in the period when the growth is most pronounced, the putting on of weight is very inconsiderable; or else on the contrary, there is loss of weight. In connection with this loss of weight in the time from about May to the end of July there is a retrogression in muscular efficiency. If we take these conditions into consideration, without applying them too strictly in view of the brief developing period of our dogs, they, notwithstanding, become very instructive. For, if it is true, that pups born in the Spring grow more quickly, at the same time they use up their store of strength; while on the contrary, if pups born in the early Autumn grow more slowly indeed, but for this very reason accumulate strength, (by which they are able to catch up in their growth later on); there would not be very much to be said in favour of breeding before the Spring. Yet indeed this time is supposed to be preferable, because the weather is said to be more favourable in the Spring, a supposition, which, however, rests only on superstition. There is nothing so fickle as Spring weather — even the cold on the ground has to be taken into consideration — while the Autumn, till quite late in the year, is more settled, and on the average warmer,

especially on the ground on which the pups are now regularly settled. As in this respect, because the Spring at its height offers the greatest security, the pups who are born in the months from April to September, who would therefore enter on the trials of Winter with a good store of strength, are to be preferred.

I have already said above that the more lively temperament of the young dog is conducive to development. Herr Külbs in a series of very thorough experiments has proved the fact that exercise has a great influence on growth; — I would here once more emphasise that by "growth" we are to understand not only physical growth but general development —; that these experiments were made with dogs makes them all the more valuable and instructive for us. The animals for this purpose were taken out of the same litters; chosen from the same blood strains and fed in the same way. The animals who were worked were made, daily for six months, to run round with a capstan a certain number of times, which was constantly increased with periodic pauses for rest, until at last they did this for three hours a day, which indeed they did willingly. The animals who were used to prove the converse of the experiment were kept continually in the kennel. All the animals who had been experimented with were killed in accordance with careful instructions, when they were between twenty-one and twenty-four months old. The results were as follows: the weight of the animals who had done no work was considerably greater than that of those who had been employed 8—11 lbs. (4.5—6 kgs as against $2\frac{1}{4}$ — $4\frac{1}{2}$ lbs. (1—2 kgs). The height of the withers in the case of the younger animals had gained 2 cms. by means of the work as compared with the 1 cm. for the animal that had remained in the kennel; with the other animals there was no difference. Chest measurement taken over the hair, on the other hand, was greater with the kennel animals than with the others; which is only attributable to the result of being fatter; when, however, measured on the skeleton, the animals who had been worked had the greater chest measurement. But what is of even greater importance is that the weight of the heart, liver, lungs, kidneys and muscles was in every case heavier with the working animals than with the others; especially as regards the heart. Moreover, the heart of the working dogs showed less fatty accretions; while what fat there was in the heart, even as with the liver, exhibited a higher percentage of phosphorus than with the kennel animals; the same was the case too in respect to the percentage of glycogenous matter in the liver of these same dogs. Finally the hollow bones of the working animals contained marrow which was particularly red and rich in blood; which marrow is the place where the red and white blood corpuscles are formed; while the marrow in the bones of the kennel animals was yellow and fatty. Herr Külbs is inclined to the opinion that physical work has a favourable influence on the process of metabolism, and also on the organs of breeding and reproduction; for work increases metabolism, and bodily warmth, but feeding influences the size and the activity of the sexual glands whose condition and activity are of the greatest importance to the building up of the body.

These data speak in the most emphatic way in favour of the high value of work for the physical development of the dog, for the formation of the skeleton, the muscles, and the interior organs. I have already sung in praise of work for the mental development of our dog in Chapter 2. We then once more arrive at this conclusion: *Work is an indispensable necessity for the shepherd dog, if he is to be a shepherd dog; but kennel keeping will become a curse for him mentally and physically.*

The fact that town children at every age are lighter than the corresponding country-bred children — fat children are sickly exceptions — and that during school time they put on less weight than country children; and further that the reinforcements for the army which came from the country were far more serviceable by reason of their greater muscular and chest development; and that again, those from city occupations whose work gave them plenty of exercise in the open air formed the best troops, and that, in conclusion, the mortality in the town is considerably higher, than in the country, gives us a further indication of the importance of bringing up in the most natural and suitable conditions as possible, that is with the maximum amount of exercise in the air, the light, and the sun. By such natural bringing up and keeping, the whole sphere of animal breeding from the horse downwards attains the best results.

I have already spoken sufficiently of the curse of kennel keeping in relation to the soul of the dog, and of its dangers for the breed in Chapters 2 and 3, but as we have also seen, keeping in a kennel is anything but a blessing for physical development as well. By "kennel" keeping we mean keeping a dog constantly confined in a kennel, for it goes without saying that the dog keeper must have a suitable place where he can leave and shut up his dog at times. The confinement of a dog to a kennel, and letting him out for an occasional run, should be the exception and not the rule. The growing dog can only obtain this all-important development by exercise, outside the kennel, no matter how long his run inside the kennel may be; the same holds true for the full grown dog as well.

The shepherd dog, has, as we saw, a body made for trotting. Trotting is a swift stepping motion which causes a quick succession of leg movements through the swinging, backward thrust of the hind-quarters. This forward motion is conveyed over to the forequarters by means of the back and the stepping out of the hindquarters. In addition to the suitable and correct leverage of the fore and hind limbs, about which the next Chapter will have something important to say, a good muscular system for these limbs and for the back is a sine quâ non for an enduring and ground covering gait. Strong and long muscles with a good leverage are to be developed through suitable work; and this effects the hindquarters, and the formation of the back, which is thus especially strengthened by means of galloping — this also develops the chest —, while similarly an even but not overtiring trot strengthens the fore-limbs. The duration of the regular

daily exercise must be adapted to the age and the strength of the dog. Any overstraining of the young animal is to be avoided; it would injure and produce just the opposite effect, for it would not temper nor harden the still flabby ligaments and muscles or the pliable and bending bones and joints, but would loosen them and make them soft, overstretch them and would even probably make them crooked. Between the not too long periods of trotting, short galloping bursts may be introduced to relieve the strain of the muscles, but if necessary, there must be quiet intervals for easy walking, or even for lying down. Trotting should be done on the hard ground, but a long spell of galloping on such a surface injures the forequarters; in this case a firm, level stretch of turf is to be preferred. A hard surface develops good well closed paws; soft meadow ground or deep sand would be unsuitable; just as a heavy gravelled surface or a ploughed field, on the other hand, develops soft feet with open claws. These ground conditions must be carefully considered where young dogs are kept permanently. Young dogs should not be allowed to do climbing and jumping in their training, before the muscles of the shoulders are fully developed; which can hardly be the case before the ninth or the twelfth month, — the joints of the shoulders and the wrist would suffer too much when landing, — and even later these exercises must only be taken with moderation. Young dogs who have not yet finished their education should never be kept on the chain, for this reason that, when on the chain, they strain themselves in their constant endeavours to get free, and the ligaments of the middle joint of the front leg (elbow) will also be overstrained, which will result in a bad and broad "stand". In the same way, frequent rearing on the hind legs weakens the hindquarters. Animals who are constantly kept in a kennel are inclined to do this because they wish at least to have a peep at liberty. On the other hand, a suitable climbing of stairs, and swimming strengthen the hindquarters and the back.

Exercise in the case of young dogs who are somewhat older can take the form of running behind a bicycle, which at first must be done slowly and for short distances. Full grown and fully developed dogs can be allowed to run behind horses, carriages, or bicycles when the speed is not excessive, when short runs at an easy pace are interspersed with opportune stops, which indeed will be the case if only for the sake of the horse, the rider, or the cyclist. With motor cars the dog's place is inside and not behind, just as with the tram. To allow dogs to follow such fast traffic over anything but short stretches would be to produce an injurious straining of the heart and lungs, and also exposes the dogs in question to the dangers of the present day traffic in large towns. If the young dog has been brought up in the town, he must be gradually accustomed to be on the watch against these dangers, for which a leash is absolutely necessary. One must always keep an eye on the dog that is thus running free; but one should not try to interfere by calling or commanding when any danger approaches. This

would only perplex the animal, and distract his attention from the danger, from which he can emerge uninjured, thanks to his presence of mind and agility.

It goes without saying that all the exercises should not be taken immediately after meals, but preferably before them. When his stomach is full, an animal should rest; especially a young animal, so that he can get the best out of the food. Running on an full stomach means a considerable load on the skeleton of the body and, ligaments; the result is a bent back, spoilt fetlocks, yielding hind-quarters, and strained shoulder ligaments.

A healthy, enterprising dog, naturally, when he has done his regular exercise, must not be left to dream away the rest of the day without occupation. On the contrary, the little rascal who is brim full of spirits is on the look out for something to do. Here then results a very real danger when the owner cannot devote himself very much to the young animal, or when he cannot be brought up in the open; in these circumstances he should never be shut up in a kennel, but in the unrestrained freedom of a farmyard. An unwatched pup or young dog can, in the first enthusiasm of his blooming youth, cause irreparable damage to household utensils, carpets, curtains, clothes, and especially shoes; in short to all things at which he can get. The result of this only too often is a beating and solitary confinement. The switching only embitters the well-intentioned little criminal, and prison spoils him altogether.

Things which he might come across can be protected by sharp smelling stuff, such as fine pepper or snuff. To sprinkle with sal ammoniac, turpentine, or bitter tasting aloes is also a good protective remedy when they can be used without injuring colours. Watchfulness and an early education, however, are the best precautions. Children who are well looked after in the house may be better and "wiser" than "gutter snipes" who can romp to their hearts content; but our growing dog would far rather belong to the latter class, and therefore he must have plenty of opportunity for romping, something to do, and companionship even in times of rest; such as children, and other animals, but care must always be taken, be they old or young, that such companions can protect themselves and are not murdered, and on the other hand that they in their turn cannot injure the pup. Further, soft bones for gnawing and hard indiarubber balls, and balls of hard wood can be provided for playing. The gnawing of pieces of soft wood should not be allowed; it leads to the biting and the nibbling of household furniture, while splinters can be swallowed, or can become jammed between the teeth. They must also not be allowed to play with stones; small stones can be easily swallowed, and will always spoil the teeth, and at the same time this penchant for playing with them can only too easily degenerate into a passion, especially with dogs who have nothing to do. A warning must be uttered against sponges; playful animals grab at them only too eagerly but swallowed pieces of sponge can produce a stoppage in the intestines and cause death.

The most critical time for the growing dog comes when the teeth change and then again with the beginning — we cannot say of the years of development into puberty in the case of dogs, as with children — but of the months of development into puberty, which is about the sixth month. This is the case, not only because the young dogs, in this time of teething and change to puberty, are specially susceptible to damaging influences and to disease germs, but also, because now they occasionally change in character in an unexpected and undesired way; as the result of which, lively pups and enterprising young dogs, who formerly did not care a damn for death or devil, will become moody, temperamental, shy and cowardly bundles of nerves, a curse to themselves and their owner, and a disgrace to their race. The results of unsuitable choice of parents, wrong keeping, the treatment of the young dog himself and of his parents, and the curse of the kennel show themselves very unmistakably in subsequent phenomena which are caused by wrong over also sharp treatment during the period of being brought up, through mental upheavals and irritations, by a change of owner, or dwelling place, by serious illness which brought the toxic secretions into the nerve paths, and through the awakening of the sexual instinct which can lead to self-abuse in the case of young animals who are left over much to themselves, and make them particularly susceptible to all that deteriorates body and soul. Where this tendency to change is not the result of serious illness, and it is not nearly always due to distemper, it is a matter of physical and mental weakness, which are the results of faulty bringing up; and thus the sins of the parents and the breeder are revealed. Even when it is not the fault of the breeder, he cannot help standing at the parting of the ways and deciding whether he will bring up such a renegade from the race or no. He is at all times useless for the breed and for the future well-being of the race; he can indeed be very dangerous, for he carries the branding of Cain, the sign of degeneration on his forehead.

We now come to the question of the feeding of the growing and older dogs. An old breeding maxim says "The better part of the race goes in by the mouth" and, "father, mother, and food-box", which means just about the same thing, both teach us the high importance of suitable feeding.

The animal demands for its sustenance, and especially for its development, the regular reception of certain nourishing substances in sufficient quantity. These substances are derived from organic matter such as albumen containing Nitrogen, including gluten which is closely related to the fats which are free from Nitrogen, and Carbohydrates such as sugar, starch etc. and also from inorganic substances such as salts of which we have already spoken in the 3rd. Chapter when considering the composition of the milk; further we must also include water, and finally the oxygen received from the air which is necessary for the internal consumption of the food, and for the promotion of the digestion and of metabolism.

The dog belongs to the family of carnivorous animals; that is proved by his tooth formation, and by his short intestines of the

carnivora, whose length bears some relation to that of the body as 1 to 5; while among the herbivorous animals the proportion is as 1 is to 20 and even more. Animal albumen and fat, along with the salts contained in them, form the chief nourishment of the wild dog; berries and fruit are taken with relish as a kind of dessert. Carbohydrates especially are only eaten so far as they are contained in the various parts of the animal prey eaten. The domestic dog has become accustomed to the food of men, by a process of adaptation which has lasted for thousands of years, and is an eater of everything, and has also learnt to appreciate herbaceous albumen and carbohydrates, which he must take in large quantities, on account of the quicker digestion in his short intestines. The dog cannot be fed and sustained on pure albumen; he would perish through undernourishment, just as when fed on pure fat, and carbohydrates. Such one-sided feeding is generally only possible in the confines of the experiment room; the dog who is left to himself, by the force of innate necessity, provides for himself the different kinds of food which he must have. When he fails to obtain some particular food, of which he is in need, for any length of time, he seizes things which appear to us harmful and repulsive, such as carrion, rotten meat, animal and human dung. This is especially the case when there is a shortage of those salts, which are absolutely indispensable if physical well being is to be maintained, which leads him to such apparent perversions of taste, because they are contained in these excreta. On the other hand we must not forget that decayed scraps of meat, carrion, and dung belong by inheritance to those things which have nourished the dog race from the times of the wild dog, by way of the domesticated dog up till the present, — for how long have we been feeding the dog intelligently? — the dung too carries the animal scent of his prey. Because the taking of such things can cause stomach trouble to dogs that are better educated, it is advisable, under all circumstances, to take special precautions by feeding them on the substances that were lacking. To remedy this perverted taste, Herr Bonatz advises the administering of bicarbonate of soda in small doses, and some drops of Iodine for a few days.

The digestion is responsible for the proper utilisation of what is extracted from the various nourishment that is taken. This begins already in the mouth with the insalivation, but the dog is a gobbler, the smaller, and especially the softer pieces, he swallows unchewed; he must only rend and tear the harder and larger pieces, which is an indication that it is not good to place before him things that are boiled to rags, cut into nothings, or boiled to a soup. It is outside our purpose to investigate the subsequent processes of digestion, let it, however, be said here, that digestion is retarded by means of physical exercise even as by over feeding. The processes of digestion in the living dog have been observed sufficiently in some very ingenious experiments; it appears from this that a food when given in the same way for a long time evokes an ever decreasing secretion of the gastric juices. That shows us that even in the case of dogs

too a diet sheet with plenty of variety should be drawn up, not only for the sake of evoking a greater hunger, but also to secure a good digestion of the food taken.

Up to 1914, the feeding of the dog was an easy matter, not difficult to arrange, and cheap. Meat and dog biscuits supplied all that was necessary for rearing and keeping. Dog biscuits are meat biscuits containing all the necessary animal and vegetable nourishment, including the salts, in right proportion. A good biscuit must be kept dry and be capable of being kept for a long time and of retaining its fresh appetising smell, and it must also be well and lightly baked. It must further be highly absorbent, easily digested, and very nourishing. This is secured when it is made from good wheat flour and carefully ground dog meat, from which the nourishing salts have not been extracted. There are other vegetables in addition, such as roots, carrots etc., which decrease the keeping qualities and the digestibility. Under-baked, mouldy biscuits such whose meat contents are chiefly composed of bone splinters, or those that have been spoiled in the making, or which have been made with ingredients containing a large proportion of acid, are most certainly to be thrown away. There were always inferior and bad dog biscuits in this country; but to-day the manufacture of such is greater than ever, because, after the manner of profiteers, the most stinking tinned beef and all otherwise useless leavings and scraps are always good enough to be used in the making of dog biscuits to bring in more ill-gotten gains. From such goods with which the market is overstocked, one can never be sufficiently warned. The good biscuits of former peace time are absolutely unobtainable to-day and will be so for a long time to come.

Feeding with biscuits was generally an extraordinarily easy matter. They were broken up and given as they were, or soaked in water, broth, or skim milk just brought to the boil, or else fried in dripping or suet. The pieces had to be chewed, and were accordingly well insalivated and this above all compelled the use of the teeth, strengthened the maxillary muscles, and exercised a favourable influence on the shape of the head. The result was that these biscuits, as a consequence of their high qualities of nourishment, were no more expensive than rice and similar food, which are troublesome to prepare, but which can only be given as pap and are a greater load on the stomach. In addition to these biscuits, I used to give occasionally to the older dogs, along with well boiled green vegetables, unmoistened dried meat; to the young dogs boiled horse flesh or good scraps of meat, and to healthy pups, in the first weeks, good ox brawn; in short everything which one could formerly use in unrestricted quantities. Some dog keepers used to go much too far in their care for the food; they always fed their dogs on the best brawn only; they gave them eggs and all possible kinds of strengthening food, and so pampered and spoilt their dogs that generally they turned their noses up at everything that was really best for them.

To-day every one must feed as best he can with the food at his disposal. To a certain extent it is easier for one who lives in the

town, because meat scraps are more available for him; the countryman's dog on the other hand has always been more accustomed to a vegetarian diet. They obtained their own meat for themselves by hunting the smallest game. Let us first make a survey of the animal food available. So far as meat from slaughtered cattle, including horses, is concerned, only the refuse from the stomach or other pieces not suitable for our consumption were generally available. Smelly meat, if not pickled, does not harm the dog, on the contrary his stomach is especially adapted to digest it. Spoiled tinned meat, however, is to be guarded against, for even the dog's stomach is not proof against the various toxins which are developed in such tinned meat, or in sausages. Smelly meat is best given raw, were it not that the meat available at present is the carrier of dangerous intestinal worms which effect the dog as well as man. Cooking extracts from meat those nutritive salts which are so important for the dog; the broth in which the meat was cooked must therefore also be given and special nutritive salts as well. A long period of feeding with only half-cooked meat causes bad diarrhea. Dried sinews which can be obtained from the knacker's yard are excellent. Perhaps dried meat from abroad will once more come on the market, but indeed so long as the value of the mark is what it is, it will be far too expensive. It should always be bought from reliable places only, because some of this meat, when fresh, is treated with strong acid to extract certain substances from it. When fresh or dried meat cannot be given to the dog raw, it is better that the cooking should not be done in the kitchen, but in an out-building; the stink therefrom generally shrieks to heaven, and it is not every housewife or cook who is angelic enough to allow such a nosegay in the kitchen, especially if it happens to be the otherwise very suitable leaf tripe of the ox, however thoroughly it is cleaned beforehand. Blood is a most excellent meat food, whether fresh or dry; it contains just the very nutritive salts that are required. Large quantities can be preserved by being heated to 100 degrees C., to get rid of the water and grinding the coagulated dried mass. 225 lbs. of blood give 45—52 lbs. of blood powder which, when carefully dried, will keep for a long time. Naturally bones are to be given as much as possible; whoever does not use them for making broth should give them raw. Marrow bones and thick gristly joints are the best. Under no circumstances whatever must hard, easily splitting bones from game or the hollow bones of poultry be given. They can cause serious injury to the throat and to the intestines. Whoever has a good bone mill can grind them small, but the easily splintering bones must be first charred. Where animal fat and suet are obtainable, it will be useful to mix them with the blood in preparing the principal vegetable food. Fish in every form, with the large bones taken out, fish-meal and minced shrimps are a very strengthening food, to which the dog must generally at first be accustomed; fortunately to-day they are always hungry, and "hunger is the best sauce". Milk, in conclusion, is a precious form of nourishment to-day, which is only given to dogs in exceptional

cases, and only then as skim milk. For dogs who have already passed the puppy stage this should only be for a special treat, and not a part of the ordinary diet, because it swells up the dog too much and does not help to build a sinewy well-knit body. On the contrary, sour-milk is a particularly fine form of nourishment; especially curds which are good both for pups and young dogs.

Whoever will, can, in addition, provide plenty of opportunities for his dogs for mouse and rat hunting, and will shoot squirrels, hamsters, sparrows, jays, crows, and other pests for them. My Hell eats small mammals, bones hair and all, and larger birds too, after the larger feathers have been plucked or scalded out.

We now come to the vegetable food which must form the staple diet and the stomach-filler. Rice, which of all grain is the poorest in albuminous matter, but which, on the other hand, contains the largest quantity of starch, can scarcely now be considered, on account of the price. Formerly it was much preferred, but I was never so enthusiastic about it, because it must be taken in great quantities, and overloads the body; which in the case of young dogs is specially injurious. Indian corn is cultivated only a very little in Germany; it is very fattening and can therefore merely serve occasionally as an alternative dish. On the contrary, oats, barley, and buckwheat, also wheat and rye, fresh, finely crushed, and softened by being soaked in warm water over night before being lightly cooked, form an excellent staple food. Naturally there also come into consideration, (especially for younger dogs) all the other kinds of nourishment made from grain such as rolled oats, barley, corn meal, and finally flour and malt dust which can be occasionally used, but not in too great quantities, as food for older dogs. The podded grains (peas, beans etc.) which contain a large quantity of Albumen, when well soaked and cooked, are naturally useful, and will generally be as little appreciated by dogs as by children. They must however, be made tasty with suet and blood; which indeed is more or less the case with all vegetable foods; while skim milk can be used for the same purpose. Appetising for a dog means that which has a pleasant smell; that is to say his nose must be deceived into the belief that the food offered is either composed of, or else contains animal food which is preferred by him. Whoever understands this has won the game and can offer his dog even sugar beet and similar abominations. Meat and bones are given to dogs, in the same way as we give "bonnes bouches" to children, not as the principal food, but afterwards, as a kind of savoury, when they have been good and eaten well; otherwise they will fish out the things they like, satisfy themselves superficially, and the remainder can take care of itself. Table Diplomacy!!!

Potatoes are somewhat heavy for the stomach, and formerly were not valued on this account; they have, however, gained a certain vogue in the War and indeed formed the staple diet for the majority of dogs; all is food when one only will, and is really hungry. For growing dogs, rolled dried potatoes are more suitable. Roots and green vegetables cannot form the staple food alone. Cabbage of all

kinds blows them out, and the dog who is thus fed is not the most welcome of companions in a room. But, these vegetables which are rich in nutritive salts, as well as salads, such as shoots, dandelions, stinging nettles, baconweed, chickweed, rape, kale, turnip tops etc. and even clover, also fruit and potato peelings, are all very good when mixed with other staple food. The best way to mix everything together is to put it through the mincing machine; some breeders understand very well how to prepare good dog biscuits that will keep for a short, time from such house leavings together with flour waste, which indeed are most suitable for older dogs. Well baked bread is also a good staple food for older dogs; the harder it is the better, because it compels them to chew and use their teeth. It should, for this reason, be dry or roasted in some suet or slightly damped, not soaked, with skim milk, or meat broth, and can often be used as a change between courses of pap food.

I have already emphasised in various ways the great importance of nutritive salts; the less blood, raw meat and fresh bones which are available for the dog, the more important is the use of the former for food. The most important of all is lime which, as we saw, is absolutely essential for the building up, the development, and the sustenance of the bones, the muscles, and the nerves. Lime also exercises an influence on the value of the food, the production of milk, and on fruitfulness. A generous use of lime, finally, is said to be a good preventive of colds. Our dogs indeed are not, like herbivorous animals, independent of the degree of lime contained in the ground. They all have a hunger for lime in their food; on this account regular supplies of food containing lime should never, in any circumstances, be omitted. The easiest way to administer lime is in the form of Calcium Chloride (Kitchen salt), not Chloride of Lime (bleaching powder), which indeed cannot keep its composition in the air but immediately dissolves. I usually employ a 50% solution and give daily from 20–40 drops of the mixture in the food. The Bath Authorities at Nauheim have produced lately a lasting and not too expensive Sodium Chloride nourishing salt, i. e. the "Deka Salt". Instead, or along with the Sodium Chloride, older animals can be fed on the cheaper Calcium Oxides, on quicklime, 1 grammme to every 24 lbs. of the dog's weight. Phosphorus is necessary for the nerves; it can be administered in conjunction with cod liver oil, or as Lecithin; when in conjunction with lime (Calcium Hypophosphate) it serves to build up the bones, while in Magnesia it makes them, and the muscles more firm. Iron conveys Oxygen to the blood, Fluorine and Calcium Silicate promote the growth of the hair. These, and other important stuffs for the building up, the sustenance and the activity of the body are contained in the mineral salts mixture made up from the formula of Dr. Grabley, which he has demonstrated to be beneficial to health and development, after experiments on man and beast. Cod liver oil, especially phosphor cod liver oil is no food, but an excellent strengthening remedy for young dogs who are backward or weakened through illness. Sugar is equally so, when given in regular doses for a considerable time

beginning from 1 to 2 ounces; which are best dissolved in milk. It is a remedy for backward animals; and also for pregnant and sucking bitches. A considerably stronger solution of sugar is also a most valuable remedy for weakness, and exhaustion; it increases the physical possibilities of service, and endurance, because it, thanks to the ease with which it can be assimilated, is a quickly working remedy for the muscles, and prevents the albumen in the body from disappearing. It is especially used, when necessary, to quickly impart new force to muscles which have become exhausted through great exertion, and to increase the speed and pressure of the circulation of the blood. Naturally, when needed, all those remedies which are recommended for weak children and for sick people can be given.

Water should always be at the disposal of the dog, in the house and in the yard, at a regular place. The dog's need for water, naturally is regulated according to the state of the atmosphere, and the manner of feeding; it is generally, however, very great; to allow a dog to be thirsty is a great trial to the animal, and most of them have a very good idea of how to show that they are thirsty. When at liberty the dog quenches his thirst as often as he can; and does that too at the dirtiest and the most stinking puddles, without doing any harm to himself. Fortunately he has such a well-ordered stomach, and such strong gastric nerves that he does not quake at such nastiness. That, however, should be no excuse for placing before the dog a filthy dish with putrid water. Dogs will eagerly take snow; they play with it, and enjoy it like children.

The number of daily meals for a growing young dog is to be gradually reduced from five to three. For a full grown dog it is generally sufficient if he can have a thorough good meal once a day; at the same time there are usually some dainty morsels which fall to his lot. Where quality must be replaced by quantity, which is especially the case to-day when food comes so often from the waste tub, it is better to feed the older dogs, as well, twice a day; a lunch about noon, and the chief meal about 5 o'clock in the afternoon. Dogs that are kept in the house over night should not, for digestive reasons, be fed later. Dogs, who work, must have their meals regulated by their service; food may only be given when work is over; that is, in the morning when they have been on night duty; while in the day time they are to be left in peace. Otherwise old regularly kept dogs have no great need of food early in the morning; a light breakfast of dry bread, broken up in skim milk, will naturally be taken with relish.

We have no certain information as to the exact quantity of food to be given to the dog; it depends upon what the dog does, and on his capacity. A working dog, a breeding dog that is much sought after, and a pregnant bitch must have more nourishing food than a member of "the Amalgamated Society of the Sons of Rest", who lazily and languidly loaf the livelong day, abiding in the aristocratic repose of his kennel as much as possible. Just like man, one

dog will fatten on scanty food, and another will remain as thin as a lath on the diet of an alderman. As a general rule, it is as well to allow the dog to eat so long as he remains by his dish; if he leaves it, it should be taken away and not allowed to remain by the hour, which only encourages the bringing up of pernickety eaters, who never eat till they are thoroughly satisfied, I have already said in another place that the dog must become neither fattened nor bloated, neither an ambulating beer barrel, on four match-sticks nor a walking shadow with bones sticking through his skin. Proper feeding and keeping show themselves in a glossy coat, and in a good condition for work; in muscles that are hard, firm, not too bunched up nor spongy, in a skeleton well-knit together by taut muscles, and in bones that are not too heavy. As food for an old dog without any special duties, but with plenty of exercise, one was able to provide $1\frac{1}{4}$ lbs. of dog biscuit, and $\frac{1}{2}$ lb. of meat per day, but at the present time every dog keeper must watch his animals more carefully with regard to their food and their excrements and must regulate their feeding accordingly.

Poor eaters are a source of worry for the owner. Such finicky eating is often the result of bad upbringing and of spoiling when young. Counter measures must then be taken; let him go hungry without remorse till the "dear doggie" condescends to accept the more ordinary food with relish, then give him a thorough exercising, and a conscientious table companion that by means of his gobbling will awaken food rivalry in the other. Sometimes foreign bodies between the teeth, bad teeth, tooth ache, and weak jaws, (a sign of degeneration), are the reasons for bad eating; but often it is a protracted trouble in the stomach or in the intestines, and then the advice and the help of the veterinary surgeon must be sought. One can generally allow pups to feed from one large dish; older dogs, however, should always have their own private dish all to themselves, otherwise brawls are inevitable. Gobblers and misanthropes are best fed apart.

I have already often uttered warnings against too long a diet of pap food. The dog must not only lap and slobber, he must also use his teeth; which is most necessary for their health and for his well-being. The formation of the skull will also be influenced through the use of the jaws and the stretching of the fore parts of the mouth, through the use of the jaws and the incisor teeth, and the broadening of the upper part of the head (epicranium), of which we shall hear more in the next Chapter. Disproportionate feeding with hard bones makes too great demands on the back teeth. The stretching of the fang part is to be desired, while the broadening of the skull is to be avoided. Young dogs must be forced to use their incisor teeth by being given bones with scraps of meat hanging on, which will oblige them to tear them off, and by giving them larger pieces of meat which they must also tear. On the other hand, one must avoid giving them hard bones which would overtax their strength and capacity. When the pieces are taken out of the dish for the necessary tearing of the food, because they must be held fast by the feet on the ground, that does no harm at all, the stomach of the dog

is used to nothing else. Domesticated eaters with "Society manners", (especially those who like good little boys and girls with bib round their neck stand before the dish, and because of their wonderful upbringing and perfect behaviour let no crumbs fall; but at the same time are too dainty to take up what happens to fall by the side of the plate), may be the very pink of propriety, and of perfect prompt obedience, but for work, for the hard stern facts of life they are, in my opinion, much too fine and unnatural. It is obvious that the feeding dish must be thoroughly well cleaned each time after use, — the best to use are those which are procured from the food factories, made with iron and enamelled, which can be obtained in various sizes, — that each meal must be fresh prepared, and that all sour, old, spoilt, and frozen remains must not be used again.

It may appear to some dog keeper that these directions for feeding go a little too much into detail, especially when he thinks on the scanty nourishment of the four footed animal which is known in the country also as a dog; or when he sees our service dogs who, in spite of the fact that at times their food has been scarce, have grown up to be strong animals. He, however, overlooks this fact that of these dogs only the strongest have survived, and that the weaker, on the other hand, have been remorselessly weeded out through disease and strain. Further, he forgets to consider that in high-bred animals it is also a question of great money value, and that a machine must be supplied with a good lubricant and good heat-producing fuel, if it is to do good work, and to preserve its serviceability. *Finally, he fails to realise that we must balance, by careful and suitable upbringing and feeding, the results which are produced through the refinement of inbreeding*, and that this is our special task, to make up for the mischief wrought by the not always good and too drastically unsuitable mode of life not entirely separable from amateur dog keeping. The service dog who has to work hard from early morn till dewy eve can take a large quantity of less nutritious food without danger to himself. He has time and opportunity to work off this quantity and to convert it into muscular power. The dog of the amateur which has less opportunity for exercise, would, on such a diet, degenerate into a pot-bellied useless fatted calf.

Let us now proceed with the physical development of the young dog. When we last saw him at eight weeks old, he was still somewhat groggy on his little pins, but already in the first stages of the growing dog. His exact future at first is very much in the air, all is still unfinished, pliable and ductile. Scarcely anything can as yet be prophesied about his future physical development, or of the possibilities of his skeleton. In making the choice of the pups it is only possible to see that the pup is healthy and lively, has strong bones and a proportionate body of sufficient length. The head must not be too broad in the forehead, the ears must be high, and the



Fig. 316. Feeding dish.

tail set low. Pups and young dogs always have conspicuously thick limbs. The tarsus in the forequarters is so strong, and the fetlocks often protrude so much that they could be thought, at first sight, to be the result of a diseased swelling; that this is indeed more pronounced in shepherd dog pups than with other young dogs is only a visible sign of their wild dog inheritance.

The more pronounced stages and the growing up begin about the third month, and last till about the end of the first year. This growth, however, is not even, and in all directions. The growth in length remains for a time behind the growth in height, and the young



Fig. 317. Pup 9 weeks old.

dog accordingly appears too short for his height. The hindquarters sometimes grow quicker than the forequarters, or vice versa, the young dog stands too high in the forequarters, or too steep in the hindquarters, until the time of compensation comes, as the result of the after-growth, and the correct squaring of the limbs. The head also is continually on the stretch; from what was at first a spherical shaped puppy-head develops a wedge-like jaw which becomes ever more pronounced, while in the forehead the relation between length and breadth is altered to the advantage of the first. The young dog acquires a long drawn out shepherd dog head which is practically complete in the seventh and the eighth months. With

reference to the weight of the older dog, it will be sufficient here to say that the weight of pups who are three months old varies between $22\frac{1}{2}$ —26 lbs.; and in the case of young dogs between 38—47 lbs. Such examples of weight do not convey very much information because, for one young dog even a comparatively heavy weight can be too light, and for another dog even a light weight can be too heavy. That the young dog must be well and nourishingly fed, but not over fattened, has been already said. Full-grown dogs of average height, about

$25\frac{1}{2}$ will weigh about 62—75 lbs. Naturally such dogs should be weighed fasting. One can seldom obtain the exact weight of an older dog, because a dog will not willingly remain on the wobbling scales.

The carriage of the ears is often a source of anxiety to the rearer of a dog. In former times, when we made our first attempts at thorough breeding, the question as to whether a dog would raise his ears or no was mainly a lottery in which one, alas, drew many blanks. To-day the progress that has been made in breeding has done much to eradicate the external defect, (for it is

nothing more), of the carriage of the ears. The somewhat smaller, but more sinewy service dog variety from North Germany had generally also smaller spitz-shaped stiffer ears, which were therefore usually erect, or else only turning over at the tips. The larger South German dog who has often been crossed with the Old German strain which has pendulous ears, on the contrary, has mostly ears which were very much tippling over, or else completely pendulous ears. The shepherds



Fig. 318. Pup 14 weeks old.

often helped themselves in this respect, as in France and other districts, by cropping the ears so as to procure erect ears, which were more useful in service. When crossing the North and the South German dog strains, there were therefore at first all kinds of ear formations, large and flabby, large and stiff, small and flabby, small and stiff, with all kinds of intermediate grades which indeed, according to Mendel's law, became a feature of the breed, through breeding. To-day, as a consequence there, is a "noticeable rise" on the dog's ear Exchange. Dogs whose ears were not erect were carefully kept at



Fig. 319. Yong dog $4\frac{1}{2}$ months old.

home by vainglorious and unintelligent breeders, but not for the advantage of their development. One sees them seldom therefore in public, while earlier on, they were often seen even at Exhibitions. Intelligent judges did not disqualify them on this account for awards when they were otherwise good and useful for the breed, because it was, and is possible to breed out this little defect.

Shepherd dog pups are whelped, like those of the Spitz and the wild dog, not with erect, but with pendulous ears. The little ears at the commencement are laid right back; at first, after a few days,

they begin to fall over in front, and then, in the course of the next weeks or months, they gradually begin to become erect from their base. While some pups already after a few weeks show perfectly erect ears, most of them begin to raise them with the change in the teeth about the fourth month; in cases where the ears were already previously standing erect, they often begin at that time to turn them over at the tips. The erection sometimes takes place all of a sudden, but mostly, slowly and gradually. Sometimes there are some very curious forms, one ear already stands beautifully, while the other tips over, or is entirely pendulous. If one examines the jaw, one will



Fig. 320. Young dog 6 months old.

generally see that the development of the teeth on this side is behind that on the other. Sometimes the powerful retaining muscle of the shell of the ear, which has no contractor, will draw the erect ears together to such an extent that their tips will meet above. Sometimes if the ears, are beautifully erect in the morning, when the young dogs have rested and slept, in the course of the next few hours they become gradually more wobbly, and finally flop altogether, and only become erect at times of special watchfulness, which is a result of a stronger flow of blood through the muscles of the ear while resting, and during the activity of the ears while being strained to listen. That, and its connection with teething, gives us an indication as to what means

can be employed (which have a direct influence on the raising of the ears), by preventing teething troubles, by a light massage of the shell and the muscles of the ear, and by bringing out and employing the pups so that they do not waste their time in the kennel. The ear generally assumes its proper position between the fifth and the seventh months; with some young dogs, the points sometimes tip over still longer, in exceptional cases even till full development, whilesome always have ears that tip over, such as the Scotch collies, and formerly, the majority of the shepherd dogs. It also happens that dogs will not raise their ears at all, but in spite of a good and high position will keep them continually pendulous; which is as little a sign of racial impurity as any other defect of the ear (which is often stated among the laity) as vice versa, erect ears are not a guarantee of this purity. A faulty carriage of the ears, either tippling or pendulous, is sometimes to be observed on one side only.



Fig. 321. Unsymmetrical carriage of the ears of young dogs during the time of the process of erection.

Generally it is impossible to state with any exactitude the direct cause for defects in the carriage of the ears. In some cases, especially in those in which the carriage is uneven, it may be due to previous pressure in the womb, certain phenomena of "throw back", or inbreeding carried too far, which would have a general weakening and unfavourable influence, or lead to irregularities in teething. Sometimes also it is due to injuries and bites, — which is easily possible among animals at play, — and, in certain circumstances too, it is due to too early sexual excitement and use, before the ears are set firm. In the majority of instances, severe local diseases are mostly responsible; chiefly distemper, which often results in diseases of the auditory canals on one side, or both. This disease, unless properly treated, continues for a long time, and affects the muscular activity, which causes the erection of the ears.

The correct carriage of the tail begins to be observed first from about the sixth to the eighth months. Young dogs do not know, as

yet, what to do with this finishing off to their anatomy. First of all, it follows all the movements of the body; willy nilly it waves itself over the back in a curl; and than again soon after it will hang itself as it ought to hang. Ugly curled tails, and corkscrews appear naturally when the pup is still fairly young; otherwise, tails that are well carried form at this time a regular bend at the tip, or begin to turn the tip inwards; this occurs generally in elongated tails, — the number of vertebrae cannot be exactly determined, — which become a nuisance to the dogs who have them, when they move. This continuous bend or rolling in of the bend of the tail leads in the end to a contraction of the upper muscles of the tail, the elevators, while the overstrained flexors lose their tensile strength, and the tip of the tail grows up into a crooked form.

The tendency which also shows itself at this time, and which later on becomes a fixed habit, to carry the tail in an unelegant steep position is a result of loitering, which here too is the beginning of all troubles. The service dog who works hard has no time nor pretext for lifting his tail too frequently. What is most useful for him is the horizontal stretched-out tail which serves merely as a rudder when quickening his pace, for fast turning. Otherwise the tail hangs down. The loafing dog, on the other hand, has time to allow every impression from the outer world to exercise its influence on him, gentleman of leisure that he is without any "ties", and he shows this by letting his "soul barometer" rise to "fine". This continual activity of the tail specially strengthens the elevating muscles which, thus over-nourished, finally force the tail to permanently take the steep position, which can be seen in the case of wild dog in a cage. Once more then, in this connection too, we would say "Out with him from the kennel and make him work".

Defects of the ear and the tail, because they are the most apparent, are at once seized on by the laity, and generally too as the only defects, while well-carried ears and tail, exercise an undoubted in-



Fig. 322. Effect produced by the contraction of the retaining muscle of the shell of the ear of a young dog.



Fig. 323. One sided erection of the ears of a young dog.

fluence on the value from the point of view of the beauty of the dog of the amateur, — but only with such, — and naturally all kinds of remedies are attempted, recommended, and sold to attain this desired end. Quacks generally boast about secret knowledge with infallible results. The stipulated remuneration will be pocketed and a naturally good carriage of the tail will be attributed later on to their measures; they will say nothing of a failure, or else trace it to something else. Excuses indeed are always as plentiful as blackberries.

The erection of the ears can, as already said, be helped by means of light massage. Place the thumb of the left hand on the root of the ear muscle, and hold the external and under part of the ear between the index and middle finger. The ear thus made erect, is then allowed to pass gently for some moments through the closed fingers of the right hand, and again through the thumb, the index and the middle fingers; then follows a gentle stroking of the muscles of the ear, about which the next Chapter will have some information to give. I do not approve of attempts to plaster up the ears, as has been done in the case of Great Danes and Schnauzers. In these races, this plastering up takes place when the dogs are quite young. Up to now, there has been no point in doing this with our shepherd dogs, because the ears either become erect of their own accord, or else they fall over again as they grow, or as the teeth change. Older young dogs, however, have too much strength to allow such plastering up of their ears; and by a vigorous shaking of the head etc. they naturally know very well how to get rid of the troublesome cardboard strips within a very short time.

It is possible to "improve" the carriage of the tail by cutting. A veterinary surgeon who is sufficiently acquainted with the course of the ligaments, the muscles, and the nerves can help with one or more incisions, or at anyrate can help in so far that the traces of his incisions will be invisible afterwards. A really intelligent veterinary surgeon will always refuse to be a party to such maimings; and will teach novices to do the same. All more drastic interferences on the other hand, will be easily proved later, even if they are not revealed by the carriage of the tail; the same holds true for all attempts with weights, leather wrappings, wire arrangements etc. which may be used to remedy faults of the tail. It goes without saying that all such interference for the purpose of fraud to catch the unwary is forbidden. Such dodges are like the tricks of the card-sharper. The earnest breeder will never resort to such copings, not even to swell his bank-balance. The defect which might be made to disappear externally, would in the course of breeding, be naturally handed on in the inheritable mass.

In dealing with the physical development of the young dog, the question of the skin, and teeth and the care of these must be gone into. The "skin", so-called in distinction from the mucous covering of the internal parts of the body, covers the body externally. It performs the function of protecting these against external influences; it carries the sensory nerves, regulates the giving off and the mainte-

nance of heat, and acts as a means of respiration. The skin proper is composed of two layers, the epidermis and the underlying subcutaneous coating; then follows the underskin, whose conjunctive tissue is formed of a layer of fat, and the skin ligaments which bind the skin from within; which last, through its string of fibres, furnishes the connection with the body. Generally the skin of the dog lies fairly loose on its substratum, and is only more closely bound to it in certain places like the legs. Nevertheless it is a mistake to lift up young dogs by the loose skin on the nape of the neck; the fibrous connection is thereby easily injured; and haemorrhage of the cell tissues can result from this. The one and only right way of picking up a pup is to grip him with the open hand under the body. The loose position of the skin, its yielding qualities, and its fatty layer protect the body effectively against injury and other external influences. If, however, there is a serious wounding of the body tissues under the skin, the skin lays itself over the wound like a plaster, which will heal well and quickly without suppuration. The ends of the sensory nerves spread out, with a preference for certain places, over the whole surface of the skin; they convey every sensory impression to the brain and are therefore in a definite relation through the feeler-hairs which are situated in certain places. The skin breathing which is so important for matabolism results through the sudatory glands. The dog sweats, as one may say, not through the skin, but through the tongue, that is, he liberates through the sudatory glands of the skin essentially gaseous substances, while at the same time only a small quantity of fluid substances evaporate, so that the fatty elements alone remain as sebaceous humour. The increased giving up of water by means of sweating, however, is the result of quick spasmodic breathing or panting. The sebaceous humour from the sudatory glands is inferior in quantity to that produced by the sebaceous and hair follicular glands; both cover skin and hair with a thin layer of fat and protect it against the decomposing and dissolving influences of air and water. Finally the regulation of the warmth of the skin is the result of the work of the capillary blood vessels in the skin, which expand during heat and allow more blood to flow through them, but which contract in the cold, and so preserve the warmth of the blood in the body. This operation is helped by the cushion of fat belonging to the underskin and the hair coat, which regulates its density according to its task, and the time of the year. The colour of the skin is generally light-or, whiteish; but with very dark and black dogs it also varies between a bluish white (opal white) to a light blue grey.

The hair comes from the hair follicles in union with the fatty glands. Our shepherd dog has two kinds of hair; the hard, marrow-containing essentially straight outer hair, whose foundation form is rough hair, and the soft, marrowless, curly or wavy wool hair, which is also called the underdown. The outer hair carries the colour, the underdown is always lighter than the outer hair, or else colourless. With dogs who have dead black or black yellow outer hair, the underdown is also more permeated with colour, and is light grey to reddish

black. This is a very fine confirmation for the theory that the black foundation colour is composed of red, in consequence of a stronger saturation with the colouring matter.

The pups are born with a thick wolly milk down which well covers the small bodies, always in need of warmth. The outer hair generally grows gradually through this down; and when this takes place about the third month, the proper colour can then be distinguished. In the milk down of wolf coloured pups it can never be predicted with any certainty whether later on the colour will have a tendency towards grey, yellow, brownish, or not; generally the colour of the pups is lighter about the eighth week. The hallmarks on the contrary can be determined soon after birth; the white ones then are specially remarkable and appear disproportionately large; and on this account cause anxiety to not a few breeding novices. They, however, disappear with the continued growth of the covering hair and not seldom disappear altogether on the breast.

In addition to this just mentioned first hair change of the pup, the dog is liable subsequently, along with the usual renewal of single dead hairs, and the loss and change of hair due to disease, to another regular change of hair at a certain stated season. This begins in the spring; sometimes, if the winter is mild, as early as February, otherwise in March and at the beginning of April, at the very latest. First of all, the underdown dies and finally hangs fast in thick tufts in the outer hair. This too gradually looses its gloss and dies. Along with this occurrence, new outer hair appears, and also, although to a smaller extent, some new underdown appears, which in a very hot summer, can again be partly pushed out along with a little outer hair, but when autumn comes, it begins to grow quickly once more. In the autumn there is again a great loss of outer hair, which, however, grows again very quickly, longer and in greater quantity than in the summer, and which is further supplemented by the ever stronger underdown which grows after it. If this has fully grown by the time winter has begun, the dog appears bigger and stronger, but the colour of the coat is lighter, because the light coloured underdown shines through the darker outer covering which it raises a little.

The more constant the state of the atmosphere when the hair changes, and the more naturally the dog is kept, and at liberty, the quicker will this hair transformation take place, and at the change of hair in the spring, suitable treatment will hasten it. Recurrence of bad weather, but especially illness, physical weakness, under-and over-nourishment, keeping in a room, and neglect of the care of the hair delay the change in the hair; and such a dog will sometimes "moult" the whole year round. In the case of bitches who are pregnant in the spring, the principal change of the hair only follows after weaning as a rule. Bitches that are weak or that have whelped when too young, and those that have become run down through nursing their litter lose a large quantity of hair and are sometimes quite bare on their backs, and only recover a good coat with difficulty. It is therefore advisable to have as short a period as possible

for this change in the hair, because dogs at this time are particularly susceptible to colds; moreover a dog who is not well cared for gets hair in the mouth, which can produce a chronic troublesome cough. Swallowed hairs become easily entangled and can produce very serious constipation. A healthy skin, and smooth, shiny and plentiful hair are certain signs of physical well being; and where they are present they are as well an indication of serviceability. A generous diet of gristle and gristly matter will promote hair growth; while a dose of linseed oil or boiled linseed are also recommended for this purpose.

The best remedy for the care of the hair is Nature's own, which is none at all. With the exception of the small assistance rendered by combing, of which I shall soon speak, I do nothing to the hair of my dogs, and I always have dogs with good and plentiful hair, without any trace of disease at all. Indeed they are liberty the whole day in summer and winter. Thus they romp about to their hearts' content; and brush themselves by rubbing against the undergrowth; they roll themselves in the dewy or rainsoaked grass, or in the snow, which they do with particular relish. They bathe of their own accord in the pond or in the neighbouring stream; and thus practise the natural care of the hair of the always well-covered wild dog. But it is not every dog that lives under such favourable conditions, and then indeed a certain amount of attention must be paid to supplement.

Too assiduous, sometimes even daily, combing and brushing, and too frequent washing and bathing are injurious; they wound, irritate and weaken the skin, and take from it, and from the hair that fat which is so necessary. The comb, whether it be of bone, or whether it be a brush-like instrument of torture, with wire bristles, has nothing to do with the proper care of the hair; it ruins the hair, and violently tears out the covering hair as well as the under hair. Hard brushes or curry combs also accomplish nothing, but soft brushes may be used. Two hair gloves are best of all, of which one is drawn inside out over the right hand, while on the contrary the glove on the left hand has the material side inwards. The whole coat must be well gone through by working both hands gently; the right hand brushing, and the left hand polishing. Where no hair gloves are available, this is to be done with the bare right hand slightly damped, while the coat is rubbed over after by a woollen cloth in the left hand. During the changing of the hair, combs and hard brushes do harm, for the growing hair will be dragged out with that which is dead. Dead hair is most easily removed with the bare hand slightly damped with water, or covered with resin. To do this, the keeper stands behind the dog, which is tied up high on a short leash, and

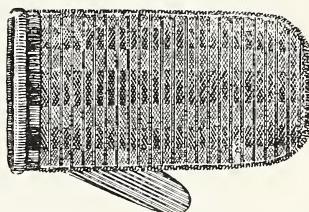


Fig. 324a. Hair glove.



Fig. 324b.
Soft dog brush.

evenly strokes him from the head to the buttocks. If this is repeated for a few days, a glossy coat will be the result which will leave behind no troublesome hairy souvenirs on clothes or furniture.

Inexperienced shepherd dog owners have their dog sheared in the summer; naturally in the belief that they are doing him a great kindness. That is a mischievous mistake; and such a naked shepherd dog with a blob on the end of his tail like a lion, looks most unshepherd-dog like; and this he realises himself, and hides himself, for preference in a dark hole, until he forgets the shame and his natural feeling of "don't care a damn" once more asserts itself. Unless the veterinary surgeon orders this on account of some general disease of the skin, or of the capillary matrix, this should never be done, for the sake of the dog. I have already spoken of the function of the hair covering as protection for warmth. For a dog "all shaven and shorn", the sun, when it happens to be there, burns unmercifully on the unaccustomed skin and produces the painful and often dangerous results which are seen in heedless human beings who thoughtlessly luxuriate too long in a sun bath, or who expose the unprotected skin to the too powerful rays, and incur thereby an attack of sunburn. At night the unfortunate "shaveling" freezes; rain and wind chill him to the bone; and for every pest that flies he is a most acceptable offering, and he accordingly slinks off if possible.

A dog who has become dirty in wet weather should first be able to dry himself in a certain special place; otherwise, he will bring plenty of mud with him into the room; if that is not possible, he must be thoroughly rubbed down with a damp cleaning rag. Mud from the street, that has already dried on, drops off as dust in cases where the dog himself has not removed it; otherwise, a soft brush is useful. A bath is not necessary therefore, because this mud, and dust as well, do not penetrate the skin of a dog who has a good coat.

At certain times some dogs show broken (defective) hair on the back near the withers; this is mostly during the height of summer when the flies torment them terribly, and the dogs, will roll themselves on the hard ground or on sticks of wood to get rid of them. Here the removal of the flies helps, together with some spirits of soft soap applied with cotton wool several times a day to the injured place. Alcohol mixed with Balsam of Peru or Lysol in the proportion of 5 parts to a hundred is the most useful remedy for the care of the hair. It is especially useful for bare patches with a thick skin; and indeed also for all places which are liable to be rubbed, or which are covered with scurf, such as the running parts, and the hocks, when the dog rubs himself by lying on the hard ground, or on the frozen snow.

Whoever has the opportunity to allow his dog to go into the water, of his own accord, should indeed allow him to do so. Such a bath, even in the coldest times of the year, does the dog no harm, if there is not a hard frost, and the dog has the opportunity immediately after of a good run to dry himself. Now and then, for the sake of cleanliness, in the dirty and smoky town, it is unavoidably necessary

to give a warm bath as a remedy against skin vermin, or as a precaution against diseases of the skin. Most dogs find this treatment very unacceptable; the very fact of being placed in the water is enough to turn the most ardent water dog against it. There are well appointed baths for dogs in certain large towns; where they are not to be found, or where the danger of infection from skin and hair

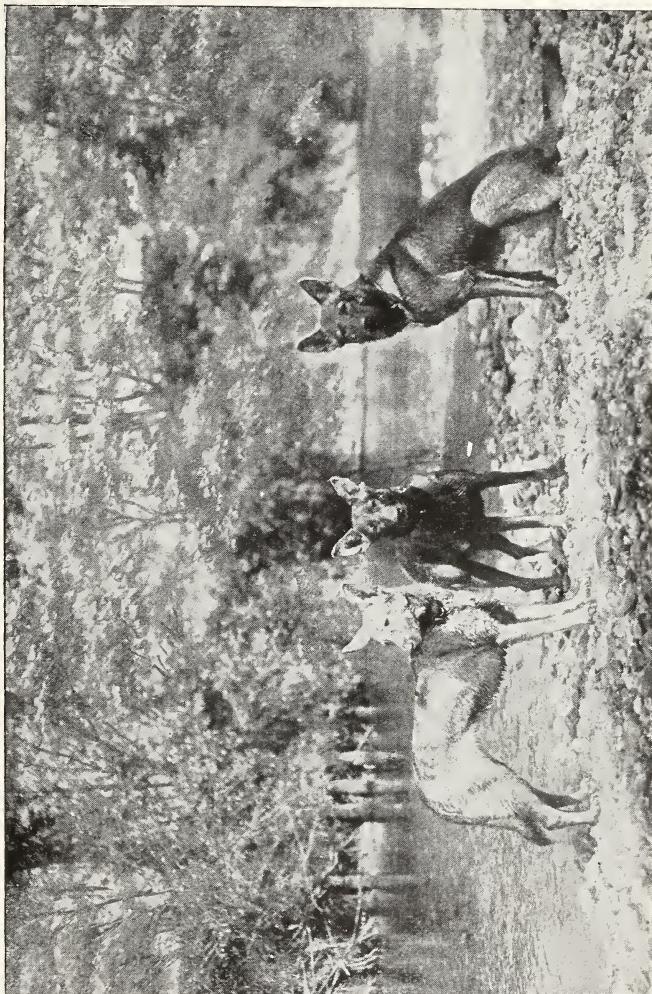


Fig. 325. Three of the best.

diseases is not beyond the bounds of possibility, a bath must be taken at home. For this purpose the dog must be placed in a tub of luke-warm water, to which a little Lysol or something similar has been added. While one helper holds the dog tight by the collar, the other helper pours water all over him, and soaps him well with a fairly mild soap, by which

the coat will be thoroughly worked through, with the fingers following the right way of the hair. The soap will then be well washed off with clean water, which can be done with a hose pipe attached to a tap which has not too high a water pressure. The nozzle of the hose must be held in such a way that the small stream of water will flow the wrong way of the hair, so that it can penetrate to the skin, through the outer covering and through the underdown. In this way I frequently spray my dogs in the summer, without any previous bath, when the weather is hot, and the fleas are too keen on replenishing the earth. Body vermin will fly from the stream of water to certain places of refuge, from which they can be combed with a short stumpy horn comb. This must also be done after every warm bath, for the Lysol only stupefies the little nippers and ticklers but does not kill them. After the bath, the dog must have an opportunity to shake himself thoroughly. Then he can be rubbed dry as well, on the outside only, with a rough cloth. In dry warm weather it is best for him to finish the drying process by romping out in the open; when the weather is cool, damp or windy, he must do this indoors. Young dogs should only be bathed so thoroughly, when it is absolutely necessary, on account of the danger of catching cold; the pups, only when the plague of fleas in the nest has reached too large proportions. After the bath they must be placed in front of the stove, and covered with a rug to dry.

So-called "dry shampoos" are only to be poured down the gutter. This "washing powder" vexes the skin when applied, and is only difficult to remove afterwards; it closes the pores of the skin, and irritates instead of cleaning it. I will also have nothing to do with the external lubrication of the hair and the hair roots; sometimes they are recommended as "delousers" but they only attract the dirt and prevent the emanations of the skin.

Watchfulness and cleanliness are the best remedies against body vermin, fleas, lice, and scurf mites. Fleas and lice are carriers of tape worms in dogs, and are also, on this account, dangerous because the dog kills them with his teeth, and therefore easily takes in the germ of the tape worm. The dog flea is a troublesome blood sucker, which generally has no taste for man. It takes its departure as quickly as possible from that which is not to its taste; but even here it can be a nuisance through its "certain liveliness". Lice are acaroid animals, from 1 to 2 mm. long; the bloodsucking louse is not found so frequently as the "hairling" who lives on the scurfy scalp of the skin and hair; but in themselves they are not so harmful. All three varieties of vermin worry their carriers more or less through their lively crawling; they disturb their rest and make the dog scratch and bite himself so much that this may lead to diseases of the skin etc. Besides the dog himself, his place must be kept clean, rugs and cushions must be frequently placed in the sun, or baked, and the straw is to be often renewed. The place of the kennel can also be sprinkled with insect powder and painted out with turpentine; resinous shavings from pine wood are a good preventative of fleas.

The dog attracts ticks to himself by running about at liberty; they swarm in some places, in the undergrowth and the grass, on the watch for approaching prey. The ticks which are about 1—2 mm. long generally settle themselves to suck on the skull, in the nape of the neck, and on the fore part of the breast. They then swell there in the entire hind part of their body until they are the size of peas and even larger. If they are sprinkled with benzine, turpentine, or paraffin, they will die and fall off. The forcible extraction with the finger nails or with a small pair of tweezers must be done carefully, otherwise the bloodswollen sack is torn away, while the head, which remains sticking in the body, can lead to wounds and suppuration.

I wish, in reviewing these pests which lie in wait for the dog when roaming at liberty, to mention one other especially serious danger which is encountered chiefly indeed only by the service dog, when he is seeking; I mean stinging nettles. On the outside they cannot hurt the dog, thanks to his thick coat; but if a dog works through a thick clump of nettles, he brushes off the corrosive sting, which, when it settles in large quantities on the mucous membranes, in the nostrils, and the bronchial tubes, can cause serious inflammation and even sudden death, as hunters indeed not infrequently find out, when they allow their dogs to push their way through clumps of nettles.

The surest remedies against the mange mite, of which two kinds are known, the less serious variety known as the "itch" (*sarcoptes*), and the very common skin or hair pit mange (*acarus*) are cleanliness, care, protection from contagion, and constant inspection of the dog. If a condition which gives grounds for suspicion shows itself, the veterinary surgeon must be consulted at once, and he, with the help of the microscope, must make a thorough investigation, and he alone is in the position to prescribe a treatment which can be safely carried out, and which will result in a cure. Experiments have lately been made with gas for the treatment of mange. As Herr Frickhinger reports in "Kosmos", Sulphur Dioxide has been found to be a very good remedy for "itch" and mange in the ears (*dermatophagus*), even against fleas, lice etc. For the eradication of the mite a double administration of gas within 10—12 days has proved to be successful, but the treatment ought to be conducted only with the help of the veterinary surgeon, as it just like the gassing of other animals, and, in unfavourable circumstances, may be followed by serious results. Equipment for such administration of gas is found at the Tierärztlichen Hochschule (College of Veterinary Surgery) in Berlin and in the "Bayerischen Gesellschaft für Schädlingsbekämpfung" at Munich, by whom the portable wooden cells for this treatment can also be despatched to other places. Mange generally begins in the head, especially on the eyebrows, also in the "elbow" and in the paws; and then it makes the little hairless places covered with grey branlike scales. The *sarcoptes* does not destroy the hair follicles like the *acarus*, which attacks the follicles themselves, but bores little paths under the skin; it multiplies itself uncommonly quickly, and produces inflammation, sores, and the ulcerous destruction of the skin affected.

Both kinds of mange can be handed on from one dog to another, and indeed from dog to man, although the mange which attacks the follicles is seldom so transmitted. Every care therefore must be taken of such mangy dogs. The various mushroom-like diseases of the skin and hair also can only be treated by the veterinary surgeon; every attempt of unqualified persons only makes such diseases more serious, and subsequent treatment all the harder.

I now come to consider the teeth, their growth and their treatment. The dog, like every mammal, has a set of milk teeth, and a set of permanent teeth. In the milk teeth there are 12 incisors, 4 canines or corner teeth, and 16 fore, changing, imitation, false molars or pre-molars, making a total of 32 teeth. When the teeth change, there are added 10 genuine or permanent back, grinding (molar) teeth, 4 in the upper jaw, and 6 in the lower, so that a full grown dog has 42 teeth

$$\text{Incisors } \frac{3 \cdot 3}{3 \cdot 3} \text{ Canines } \frac{1 \cdot 1}{1 \cdot 1} \text{ Pre-Molars } \frac{4 \cdot 4}{4 \cdot 4} \text{ Molars } \frac{2 \cdot 2}{2 \cdot 2} = 42.$$

The numbers on the upper line indicate the upper jaw of which the two sides are separated by the full stop. Among the incisors we must make still another distinction of the 4 teeth (forceps), which are the most inward in the middle of the jaw; 4 middle teeth follow them, and finally the 4 eye-teeth, which are well set in the upper jaw, serve with the wild, and in the domestic dog for seizing and holding; both with the assistance of the incisors. The incisors serve to divide up the food taken, and finally the molars serve to chew the large pieces torn by the incisors, and to crunch the bones. The 4 largest of the molars, which are by far the strongest in the jaw, are called tearing or flesh teeth. In the upper jaw, they are the first to change, while in the lower jaw the first are the genuine molars; and on both sides the third in number counted from the gums. The two tearing teeth of the lower jaw are, unlike the fang teeth, the stronger ones.

The pup is born toothless; at the commencement of the third week the incisors begin to break through; the forceps of the lower jaw come first. The canines begin to come at the beginning of the fourth week, while the pre-molars, and last of all the flesh teeth of the upper jaw break through between the third and the eighth week. Sometimes, shortly after, but generally first about the commencement of the fourth month, the change begins to take place; first again, the incisor teeth, after which follow the canines, which are fixed by the sixth month, and often even earlier. At this time too the foremost of the pre-molars — unchanging!! — a small thing above and below, breaks through, while the upper flesh tooth changes, and the lower one appears. During the next weeks, the last and permanent molars follow; here as well, the last two are only very small, so that the dog has all his teeth by the eighth or the ninth month. A young dog who has them all is at least nine months old. These, and the aforementioned periods of time, are also the only reliable fixed points which can be

used for determining the age of the dog. According to Herr Frank the flaps of the innermost pair of incisors, and the forceps disappear already in the first or second year; the flaps of the middle teeth during the next year, and those of the eye teeth, finally, with the fourth or the fifth year. These examples, even as those about the wearing down of the points, or the falling out of whole teeth, can give no certain starting point, because these phenomena depend on the constitution of the teeth and the use to which they are put, and the keeping and the feeding of the dog. If it is not possible to definitely fix the age of the dog from the Stud Book, it can only be given approximately. Serious mistakes can be made, because badly bred and kept dogs are not capable of much resistance, and often appear senile at an age when animals that are neither overbred nor overworked, but are intelligently kept and worked, are still fresh and full of life. Dimness of the eyes, loss of sight and hearing sometimes a little greyness just above the jaw and over the eyebrows are generally sure signs of old age.

Healthy and strong pups go through teething and the change of teeth without anything unusual happening. With overbred, weak and delicate young animals on the contrary, the teething time is not got over so easily. Delayed teething and changing of the teeth are as bad as any disease; moreover at that time, illness often appears as a consequence or accompanying this, and more often than not, young animals thus weakened will die. Symptoms of convulsions are seen with excitable and nervy animals. The milk teeth sometimes do not fall out of their own accord, the substitute teeth, (this happens often, especially with the canines), grow out alongside of the milk teeth but in an irregular position; in which case the milk teeth must be quickly drawn.

While the soundly bred and well kept young dog produces also a healthy set of teeth, the substitute set of teeth belonging to a dog who has had teething trouble generally leaves something to be desired; from the commencement the enamel is quickly spoiled, the teeth become first yellow, then brown, and rotten. This is generally and incorrectly known as "distemper teeth", but has nothing further to do with distemper than this, that dogs so effected are often descended from parents who have had a severe attack of distemper. Such a jaw can be also the result of weakness in the bones (rickets) which is due to a lack of lime and salts in the mother's milk and food, and the inability of the weakened animal to assimilate this stuff; it can also have some relation to general debility. In all cases, it should exclude animals thus diseased from being used for breeding, especially if there are other signs which point to the same cause. On the other hand, this so-called "jaw distemper", (on which, because it is easy to recognise, some "savants" will insist on harping just as on the defects of the ears and the tail), can also very easily be the result of external influences which injure the teeth, such as too hot food, a prolonged diet of pap which dispenses with the use of the

teeth, playing with stones, and lastly to tartar on the teeth. Tartar, which can also wound the gums, and cause them pain must be removed in time wherever it shows itself. This can only be done forcibly by scratching it off with a small hook, which naturally no dog likes. It is far better therefore never to allow tartar to appear. Suitable food which will force the dog to chew, dog biscuits and hard bread are the best preventives, for the dog cleans his teeth with them. It is indeed often recommended that the trainer should also clean the dog's teeth; this should be properly done with tooth powder, chalk or with any other powder, and can perhaps be done with smaller races — but with shepherd dogs!! I fear that such a dog would for ever bear a grudge against any keeper who presumed to attempt such a proceeding. It goes without saying that if one could treat and fill the spoilt teeth, as can be done with other animals, the filling would not remain in very long when the dog used his teeth in the good old fashioned way to scrunch up his bones. The irritating effect of tartar can lead to bleeding and ulceration of the gums, and finally to thrush. Such a dog has bad smelling breath, and is therefore an unpleasant companion to have in the house. He can be temporarily helped by having his mouth rinsed out with permanganate of potash mixed up in a 20% solution strength, but the spoilt mucous membrane of the mouth can open the door to all kinds of injurious microbes. Care therefore must be taken to remove tartar as soon as possible when it appears in anything like considerable quantities. Small regular doses of kitchen salt or bicarbonate of soda in the drinking water, a tea-spoonful to a pint of water, are recommended.

Finally, careful attention must be paid to the dog's nails. Dogs who are properly kept and who have plenty of exercise wear their nails down to such an extent that nothing further need be done, for bad growth is seldom. With dogs that are kept in the house, on the other hand, the fact that they seldom run, or only on an even smooth floor makes the nails grow faster than they can be worn down. One can hear a troublesome trapseing, (as when the skeleton of the haunted castle makes his annual return to the baronial halls), and such nails easily cripple, grow into the flesh, splinter and suppurate. The dog can also injure himself badly when scratching himself. The nails must be cut short in time, which is best done with a pair of very sharp small cutting pliers, or with a pair of toe-nail scissors, shaped like a pair of cutting pliers. The nails should first be made soft and supple by being placed in a warm footbath, or by rubbing with oil; when cutting it is best to hold them against the light so that one only cuts the dead nail and not the quick.

I now come to the diseases of the dog, and I shall perhaps disappoint some readers because I shall deal with them so briefly, and shall above all say nothing about the treatment. I am most particularly of the opinion that this particular province has its own particular profession, i. e. that of the veterinary surgeon. Our vete-

inary surgeons learn and practise at the Universities mostly on dogs, and if later on in their profession, many of them get out of practise with regard to dogs, this is not their fault, but only that of the dog owners who would sooner spend considerable sums of money on secret remedies and quack medicines than consult the regular doctor. Owing to the great advance in dog breeding in Germany there were and are everywhere, and certainly in the large towns, veterinary surgeons who have made a special study of the treatment of dogs. There are, no doubt, some dog owners who have gained such rich experience through observation that in many cases they will be able to select a proper treatment which will not injure the dog but will supplement the efforts of Nature. But soon ambition may urge them, and they may wish to air their experiences for the common good, and then they too are also a danger, because they only pave the way for more quacks. If then the veterinary surgeon is fetched at the last, he can in serious cases, do nothing especially when the sick animal through faulty treatment by unqualified persons has already been nearly brought to the point of death. More serious than the unauthorised persons on their own account, but who at the worst can only injure themselves, are the professional quacks who introduce all kinds of secret remedies from the most foolish to those that have the most scientifically sounding names. It is not the purpose of all such quack remedies to help the sick animal, but only the sick purses of the discoverers and the retailers. Therefore there are countless infallible remedies for distemper, worms and other maladies whose praises are trumpeted to the wide world by means of recommendations and testimonials of "cures", because fortunately in some cases, the dog of his own accord became well again, in spite of these remedies. Treatment by correspondence is just as dangerous as treatment by unskilled persons. Apart from the fact that the advice generally arrives too late, only the fewest of lay people are capable of giving a properly sufficient description of an illness in writing, upon which the doctor can prescribe a suitable treatment.

The novice is generally quite unable to judge whether his dog is seriously ill or not; he must then procure sound advice as soon as possible before the simple occurrence becomes more serious. The experienced keeper of a dog, however, will have learnt that good food and proper keeping are the best precautions against illness, and that he himself cannot do very much more. To guard against the risk of infection is a good remedy. Infectious germs are generally propagated by means of other dogs and their excrements, — here dogs who long since recovered from disease, or apparently healthy dogs can be the hidden carriers and secreters of the causes of diseases, — while diseases of the hair and skin are also caused by the places and the equipment belonging to other dogs. A sharp watch therefore must be kept on all such things, and on the company the dog keeps. *It is a specially criminal piece of foolishness, and unfortunately, however, only too frequently observed to bring a sick dog into the house of another dog owner:* whether it is to "ask his advice as an expert", or, to put

it plainly to save the expense of the veterinary surgeon, or whether it is for breeding purposes. A hand grenade kept ready for the purpose is the only remedy against such criminal fools. Heavy compensation should always be inexorably demanded for any damage thus received; such people can only be made, by means of heavy penalties, to realise that there are other people in the world besides themselves. Whoever wishes to be informed about symptoms and thus to be warned in time, and to be able to administer suitable treatment till the veterinary surgeon comes, will find the necessary exposition in some popularly written books such as Braun, Handlexikon der Hundekrankheiten (Pocket lexicon of the diseases of the dog); Hilfreich, Der kranke Hund (The dog when ill); Konhäuser, Die Krankheiten des Hundes (Diseases of the dog); Müller, Der kranke Hund (The dog when ill); Ublacker, Der Hundearzt (The dog doctor).

General symptoms of disease are loss of liveliness, an inclination to creep into dark corners, poor feeding, irregularity in "evacuations", repeated vomiting, dull eyes, dishevelled coat; and when dogs are feverish, warm dry crinkled nose. The condition of the nose generally is no infallible means of deciding the state of sick or feverish dogs. Dogs have a warm and dry nose when kept for a long time in an overheated room where the air is dry, and when working in extreme dry heat; and, according to Herr Hauck, when they have slight but not feverish colds, and after burrowing in the sand or the ground. The nose, however, at those times feels smooth even when warm and has not the rough ridged appearance which it has when the dog is really feverish. The cool damp smooth shining nose is, as a rule, a sign of good health; although, according to Hauck, a dog can have a cold nose even when he is feverish. One feels the pulse of the dog on the inner side of the shank, about the middle, right under the knee. In healthy dogs it varies between 70 to 120 beats a minute according to whether the dog was previously resting or running. The temperature of the body can be taken with a thermometer, of which the point, smeared with oil or vaseline is inserted into the anus. The dog must be held fast in front, and naturally must not be allowed to sit down. The normal temperature of a healthy dog varies between 38.5 and 39 degrees Centigrade, and is considerably higher than with man.

Constant attention must be paid to the evacuations of the dog, because their composition, and the kinds of droppings can give very conclusive information as to their state of health. The dung is more or less sausage-like or soupy according to the food given. A variation in one or the other direction takes place according to a corresponding alteration in the diet. A considerable hardness, or a very thin liquid are always indications of stomach troubles; especially when there is an alteration in the colour; or when there are large quantities of undigested remains which could not be utilised for nourishing; or when they are mixed with mucous, water or blood. Sometimes balls of grass are mixed with the dung; this is the result of the grass which was taken to clean out the inside. In time of "moulting" there

are also balls of matted hair, which, has been licked off, and which can lead to very serious constipation, and finally there can be intestinal worms or parts of tape-worms. Pain when evacuating is caused by obstruction in the bowels and is also a symptom of disease. Healthy urine is light, to dark to reddish yellow — and clear in colour. Variations in the colour, cloudiness, the presence of blood, unpleasant small, painful evacuation, and in drops only are signs of disease. Let it be said here that dogs who are kept much in the house must have frequent intervals and opportunities for relieving themselves; the holding back of dung or urine can cause long intestinal and bladder pains.

It is not a very easy matter to physic a dog. When the head has been slightly lifted, and the mouth opened, pills can be laid on the tongue, and, if possible, pushed right down with the index finger. The easiest way to open the mouth is to open the left hand and to push the thumb and index finger behind the canines on both sides, thus gripping the upper jaw and the back of the dog's nose. A powder which immediately dissolves of itself can be simply placed on the tongue, and the mouth must then be held closed so as to prevent its being spat out. Powder, which is not easily soluble, or which is altogether insoluble, must be enclosed in a wafer, and administered like a pill to avoid the powder going down the wind pipe. Liquid medicines are to be given in a spoon placed in the roof of the mouth. It is still better to make the dog keep his mouth closed, and then the liquid is given by drawing a fold of the underlip, near the angle of the mouth to one side, through which the dose can be poured from a bottle. Here too the head must be held sufficiently high, so as to prevent the medicine being drawn into the windpipe. The dog can be compelled to swallow by closing his nostrils. If he is not willing to take the medicine, a helper must stand over the dog, who must be made to sit so that the chest and the neck of the animal may be held between his

Distemper is the most dangerous disease for a dog, and novices and the "man in the street" so describe every disease of the dog, especially of the young dog; hence there is a great deal of confusion about the disease and an innumerable quantity of domestic and other remedies which range from stinking cheese and old herrings, by way of a means of extracting the glands of the anus, down to the very latest remedy. Cheese and herring were not so futile for at least they do clean the out intestines, but the glands of the anus, of which the dog has several round the orifice, have nothing whatever to do with distemper. For the easier evacuation of the dung there is a special, but highly unpleasant remedy which can be readily resorted to by pressure but it always seems loathsome to the laity, although it is not really so; in cases of feverishness this secretion is not increased, but on the contrary is diminished. These glands often become hard in older dogs, (quite apart from any distemper), through improper keeping, and feeding and other causes such as itching intestinal worms, of which the well-known sliding on the hindquarters is a sign.

I have not yet observed the hardening of the glands in shepherd dogs, although in other races I have seen it often formerly. This may depend on the dog, which is always in motion whenever it can be, but whether hardening is to be observed in dogs kept in the kennel, or whether it prevails among dogs kept in the house, I cannot say.

We know to-day that distemper is an infectious disease that is encountered in various different forms and that it is not attributable to one cause only. One irritant affects the breathing, another the digestion; both of them have, apparently, in order to become active — (for these well known irritants are everywhere and permanently propagated) — the preparatory work and the cooperation of the Carré bacillus (spore) as an indispensable necessity, which on account of its size is not yet tangible. The symptoms of the disease are not only confined to the trachea — they go from there easily to the eyes and ears and end generally in inflammation of the lungs — they also appear in serious stomach and intestinal trouble with very evil smelling, at first watery, foaming, green, and finally blackish bloody diarrhea. They cause quite often as well an outbreak of blisters over the whole body; indeed they can attack each separate part of the body in a special form and always different, and finally result, when not dealt with suitably, or when it is a case of an otherwise nervous dog, in very serious nervous symptoms. These symptoms first begin with twitchings of certain groups of muscles on the head and the legs; they lame the legs and attack the lower jaw, they produce inflammation of the spinal cord and of the brain, and even cerebral cramp. Whether this nerve distemper can be traced back to one special source or only to the working of the other contagious matter of the released nerve toxins has not yet been positively ascertained; but at anyrate it is the most serious form of distemper. The symptoms need not always appear in the same way, through the bronchial tubes, the intestines, the skin and the nerves; they can exist together at the same time, they can break out one after another; but sometimes one form follows after an interval of weeks, or even months; each one apparently independent of the other; while again the disease is sometimes apparent along with the occurrence of nerve distemper. This form attacks most seriously and most certainly all overbred dogs, kennel animals, and the progeny of dogs who had suffered severely from distemper, and whose nervous and physically weak condition can only offer a feeble resistance to the attack of the distemper irritant. If an attack of nerve distemper has set in, a sufficiently strong dose of morphia is the best remedy; this relieves the dog permanently from pain and a joyless future, and the owner from worry and the necessity of seeing these pains and the frustration of his hopes. Even when the dog survives, the twitchings remain and finally lead to deformity and lameness. Certain nerve remedies may sometimes have a good effect to quiet them and to exclude the most serious consequences, but in any case such animals have become unfit for breeding. Whoever wishes to breed mentally deficient, crazy dogs, or nervous cripples can try with them; *but whoever wishes*

to breed shepherd dogs sins against the whole race, if he uses such decaying dogs for breeding.

The distemper irritants do not all apparently possess the same poisoning effect; sometimes the disease occurs in a comparatively mild form at others, it is uncommonly malignant. Pups which are being suckled are said to suffer from this the least often; the older the dog, the better he is fed, and the more suitably he is kept, all the lighter will be the attack, which too need not necessarily happen to every dog. Most dangerous of all is an attack during the changing of the teeth, which apart from this has a weakening effect. A bad attack of worms too increases the danger because one serious injury is added to another. Dogs who have once been ill with this are generally immune from distemper afterwards; another attack is not quite impossible, but it occurs very seldom. If the dog has an attack when he is just out of his puppyhood and about eighteen months old, it is generally only very mild. The infectious matter is carried from animal to animal, either directly, or through objects with which they, or their excreta, have come into contact. Generally a period of from four to seven days is reckoned for the outbreak of the attack after the first infection, though a dog can carry the infectious germs for weeks at a time. According to Hauck physical weakness, overstrain, loss of blood, chills and digestive troubles are favourable conditions for infection. Generally the natural physical constitution and the tendencies are of greater importance for the maintenance of health, and for the appearance of a disease than the disease germs themselves, which can only exercise their powers in favourable circumstances.

From the various kinds of irritants and the forms of the disease it is obvious that there is no panacea for distemper. The best and only precaution is that when, in spite of all, an attack comes, suitable skilled treatment, without any attempts at quackery should be applied at once. Precautions can already be taken by intelligent breeding, strengthening food, suitable keeping and by the avoidance of everything which can facilitate the entry of the ever-present irritants into the body; such as colds, diseases of the teeth, stomach, intestinal troubles, and finally worms, and the remedies used against worms. Further precautions are also possible through inoculation, which however, must be repeated every four or six weeks; at anyrate when there is any special danger of infection, as, for instance, when there has been a particularly serious outbreak of disease, or before a Dog Exhibition. These inoculations as a means of cure must be supplemented by other expert treatment. Only the skilful specialist can decide which out of all the available vaccines is the best as a preventive, and the most suitable for the treatment. Lately, injections of Behring's inoculation against diphtheria are said to protect the health.

Novices often demand to buy dogs "who have already had distemper". That is just what a layman would think, first, because

as we have seen, not every dog is bound to have a form of distemper, or even the real distemper. Then the very fact that they did have it and yet survived the attack, makes unfortunately, a great difference to the value of not a few dogs. Happily in the case of a strong hardy animal, this does not always occur. The dog owner must not be over anxious about it; it serves no useful purpose to pamper the dog and to wrap him in cotton wool, rather the contrary.

An official veterinary surgeon from Vienna wishes to prove from statistics that shepherd dogs are specially liable to distemper. There may be something to be said for this because, according to Herr Duerst, altered conditions of life act as predisposing causes for the transmission and the inheriting of diseases. Liability to distemper can be inherited, just as liability to other diseases, and the shepherd dog who is compelled to live in the town, torn from his natural conditions, is only too often kept in unnatural surroundings in the town. Another reason can be found in this that the race, which till twenty years ago lived almost entirely in the country, and in natural conditions, has not yet become so proof against distemper, and therefore is more frequently and more seriously attacked, than races who commenced their town life a long time ago, and are accustomed to its dangers, which in itself is to create a certain anti-toxin against illness. So far as nerve distemper is concerned, it attacks those dogs in the first place that are the results of overbreeding and kennel breeding; for the sacrifices which remain on this field of slaughter I have no pity, they atone with their lives for the sins of their breeder, but they free the race from cast-offs which must ruin the racial development if they survive.

Intestinal worms are no less a danger than distemper, and in the case of young dogs belly worms especially, because these can increase to a large quantity after a comparatively short time of development, and can cause fatal intestinal inflammation and constipation. These belly worms, which are yellowish to reddish in colour, and from $\frac{1}{8}$ " to $\frac{1}{2}$ " long, can also perforate the intestines and thus cause peritonitis; finally they also bring on severe nervous symptoms, giddiness, convulsions, and cramp. If they pass from the intestines into the stomach, they cause violent vomiting which sometimes expels them. Among the six different kinds of tape worms, finally, which can harbour in the skull cavity of a dog — they can grow to be several yards long — is a little gourd-shaped tape worm which is the most dangerous for young dogs because fleas and "hairlings" form the medium for it. Opportunities for taking the germ are always to hand, and because it develops very quickly, it can, when met with in quantities, lead to acute constipation. The other varieties of tape worms are not so frequently found, especially when good care is taken to give the dog refuse, in which the parasite lives as a bladder worm, only after boiling. This should always be borne in mind to-day when so much refuse and less valuable meat must be given as food; it must most certainly be remembered when the brains of animals

are given as food so that the propagation of the most dangerous dog tape worm which appears in sheep as the cause of staggers may be obviated. This boiling is also to be done as a precaution against the three jointed dog tape worm (*Taenia echinococcus*) which is $\frac{1}{2}$ a cm. long and which in its young form can also be transferred to man, and can there develop in the most vital organs, such as the liver, lungs, and even the brain, and can cause the death of the person so attacked. It was thanks to the careful inspection of meat and the destruction of all that was suspected that this danger became so small; it is probably again much greater now when refuse must be used. To allow dogs to lick one on the face or hands, or to allow them to feed from certain plates and dishes, which ought to be kept for human use only, — quite apart from the fact that this is a repugnant habit which is only too rarely realised to be so, — should be carefully avoided as dangerous. Children must be forbidden to allow themselves to be licked. The dogs themselves can already be broken of this habit, to which they are accustomed by long practice, by suitable up-bringing. The small white thread-like pin worms which are from $\frac{1}{8}$ —" $\frac{1}{2}$ " long, finally, which settle especially in the large or main intestines, are harmless; they can, however, cause a considerable irritation in the anus and worry the dogs into a frenzy; they slide or dance about like wild things in order to bite the itching part. The more dangerous palisade worms, which are also small, but more reddish in colour rarely occur in our country, at anyrate only in the height of summer.

Unfortunately one can always count on the presence of worms in dogs. The younger the dog, the more dangerous is the parasite. In older dogs also they spoil the condition of the nourishment, and the state of the hair, and they undoubtedly influence the disposition and the temperament. Intense quick treading, with the back well arched like a cat, is generally considered as an indication that they are troubled with tape worms.

There are some reliable effective remedies against the different kinds of intestinal worms, but it is obvious that those which are said to injure the worm and to expel it, will also injure the interior economy of the dog who has them, and can indeed do much serious damage, should the dose be unsuited to the age and the constitution of the dog, especially in the case of a young dog. I would therefore like to utter a most earnest warning against the pills and medicines made up ready for this purpose. Every kind of worm and every dog must have its specially calculated dose. If the expulsion of the intestinal parasite is absolutely necessary, this must be reserved for the skilled person, i. e. the veterinary surgeon. The unskilled person often damages his dog in quite an inexcusable way through too frequent doses of worm cure, and the use of remedies that are too drastic, which first paves the way for the onslaught of distemper through the constant irritation to the intestines caused by such doses. Dogs generally seek to free themselves from the parasites

which trouble their interior by means of a plentiful diet of grass, leaves, litter, and even horse dung.

Bone weakness, or “rickets” (“English disease”), which has been frequently mentioned both in this, and in the preceding Chapter, is a general disease, whose foundations are inherited, and which can be traced back to feeding which lacked lime and nourishing salts, and to unsuitable keeping in a small damp room without light and exercise. Dogs who show bulging, swelling and bending bones, especially in the legs, the ribs and the spine, or bad teeth, are to be excluded from the breed and from the possibility of transmitting their defects.

Cleanliness is the first condition in the treatment of wounds. Smaller wounds — and the layman must only venture to treat them — will generally be quickly healed by the dog himself. The wounds and the surrounding flesh must be well washed with an antiseptic solution like Lysol, but in the case of wounds on the jaws or near the eyes with a 4 or 5% solution of boracic acid. When necessary, the hair near the wound must be cut off. Foreign bodies which have penetrated must naturally be taken out of the wound. All wounds, when a special bandage is not necessary, are to be sprinkled with a drying powder, with Dermatol or Tannoform; when nothing else is available castor sugar can also be used. Iodoform on the other hand is to be avoided; it is poisonous, and naturally the dog will lick his wounds.

Injuries to the feet demand special attention. After the wound has been carefully cleaned, the edges are to be carefully drawn together, and painted over with several coats of quick-drying Iodoform-Collodion. Several strips of plaster must be wound cross-wise over it, and the entire foot wrapped up in a good bandage. If the dog will not keep on the bandage, nothing helps more than to keep him short on the chain for a few days so that he cannot get at the bandage. For this purpose, the chain must be fastened to a ring in the floor, or round the foot of a heavy piece of furniture. Naturally in such cases care must be taken to give suitable exercise from time to time. In winding the bandage, care must be taken not to twist it too tight, and, on this account, a damp bandage, which is laid on from front to back, must not be bound too tight.

As a conclusion to this Chapter, I wish to consider the rights and the duties of the dog-keeper both written and unwritten, of which there are very few of the first, and very many of the second. Therefore first of all, there is the duty of paying the tax, which varies so considerably in different countries, that it is beyond our scope to discuss it in this book.

In most towns the dogs are liable to be compelled to wear the muzzle, apart from the times of epidemics. In Berlin, in 1911, this was relaxed by Herr von Jagow, who was Chief of the Police at that time, in consideration of the fact that no muzzle is an absolute pre-

ventive against biting; a contention which was supported by professional opinion and legal decisions. Other towns followed this very just decision, but unfortunately this relaxation for dogs and dog owners has been withdrawn as a result of the "New Freedom". In other towns, only dogs of a large breed are compelled to wear muzzles.

Dogs are included in the Contagious Diseases' Act of the Government, (Reichsviehseuchengesetz). This is chiefly on account of rabies, and also deals with the possibility of their carrying other diseases which do not effect them, such as foot and mouth disease. It should be a duty to indemnify the owners of dogs who are killed in this interest, which unfortunately has not been provided for by the Law of the Land in Germany at any rate. The "Kartell der Rassezuchtvereine und allgemeine Verbände" (The Association of Race Societies and General Associations), has petitioned for the alteration of these regulations in a very detailed memorandum, but a decision on this point has not yet been given. The genuine service and breeding value of a dog which is entered in the Stud Book can, however, always be correctly ascertained by means of information given by official experts, which must often happen in legal cases dealing with claims for damages owing to death or injury. That this worth sometimes assumes large proportions in the mind of an imaginative dog-lover — "fancy price" — and that this is quite different from the profiteers' price to-day is obvious. It is greatly to be desired that distemper (so far as it appears as an epidemic) and the infectious diseases allied to it, such as the so-called "Stuttgart dog typhus", and also the different kinds of mange, could be included in these Laws, and that notification of them should be made an absolute duty. It would also be important above all if there could be a Dog Insurance on a kind of cooperative basis under State control and with State assistance. The attempt to found unofficial Insurance Companies was indeed made by different people. Lately the "Veritas" Cattle Insurance Company (Viehversicherungsgesellschaft „Veritas“) at Berlin has included dog Insurance in their business. Time must prove whether it will have better success. The annual obligations are inevitably high and amount to 7% of the value insured, which is never fully paid. The municipal regulations also concern themselves with the dog, especially the section which deals with the liability of the dog owner. The regulation in question reads as follows "If anyone is killed by an animal, or suffers any injury to his body or his health, or if anything belonging to him is injured, whoever keeps the dog is bound to indemnify the person in question for the injuries thus sustained". This regulation is very hard, and a relaxation on behalf of the owners of other animals has been decided on by the Reichstag, but this does not extend, in spite of all the efforts which have been made, to dog-owners. In order that additional pressure may be brought, the efforts of people who represent the interests of the dog owner and breeder should be continued. A dog can cause damage very easily, even indirectly, and the liability of the owner is

always brought home to him, while the judgments in this respect which are given in Court are hard, as we know by experience. Damage to property can already be the cause of considerable expense, especially in these days when the prices for necessities are continually rising. They include not only damage to clothes, but to all property of any description, and to live animals; as, for instance, to poultry cut off in the bloom of their youth, and to others, and, in the case of a brawl, to the dog who came off second best in the encounter. The consequences, however, are very serious when it is a matter of the injuring or killing of a person. This terrible mischance can befall the most harmless, mildest dog as the innocent original cause of an irremediable tragedy. Through a combination of unfortunate circumstances a man may possibly fall over a dog, and sustain such severe injury that he is incapable of earning his living; or else a child is frightened by a dog, has convulsions and must remain in the hands of the doctor for a long time. The dog owner must always pay for each and every resulting damage. At least the person who is injured, or those who are labouring under the delusion that they are injured, will always try to extort compensation from the owner of the dog. If the owner should succeed in proving his innocence before the judge and obtains an acquittal, even then the case will involve him in heavy expense and much trouble. It is, however, a different matter when the owner is insured against liabilities; it cannot therefore be sufficiently impressed on every owner of a dog that it is advisable notify the fact that he possesses a dog to a Society that undertakes insurance against accidents. For members of the SV., there are special terms for Insurance Policies, information about which can be obtained from the Head Office of the Society.

The Hunting Laws vary in different States, and even in different localities; they generally, however, agree in this that a dog which is not held fast on a leash by his master when in a hunting preserve is practically considered as an outlaw, and is to be surrendered to the discretion of the owner of the preserve. And when on his side the official judge has decided that the value of the too carefully preserved game has no relation to the worth of the slain dog, to compensate for the killing, it does not generally help the poor dog over much. According to a new ruling of the High Court (Reichsgericht) of Jany. 16th 1918, a hunter makes himself liable for damages when he cannot prove that the shot dog was actually pursuing game. This claim will, however, be sworn to by most hunters even bona fide, and any other possibility of proof is out of the question. Therefore also in this respect changes of the prevailing Regulations must be made in accordance with the new conditions, especially as the training and the schooling of service dogs can only be successfully carried out in the open country. These dogs also would always be menaced through the pieces of poisoned food laid out which are often a danger to flock dogs. With regard to this laying of poison also a change must be made in the Regulations which have hitherto been in force.

In view of the fact that we are dealing with legal questions, let it here be said that the Law makes a distinction between the "owner" and the "possessor", which must be known, and at times most carefully observed. The owner, according to Law is he who owns the dog and is generally described as his "master"; while the "possessor" can hold a thing "in tenure" without being the actual owner of it.

German dog breeding, in consequence of the tremendous impetus it received before the War, had grown to have a great social and political importance. Unfortunately the collating of statistics and documents has been neglected hitherto by the circles who were interested. They would be of great importance, because dog breeding, with all which it includes, has been suffering from a lack of suitable representation by the proper authorities, and up to now was generally regarded as something subsidiary; but now the service dog and all that concerns him has indeed experienced a reaction in his favour, through the proved usefulness of the dog, which it is to be hoped will be maintained. The social importance of dog breeding consists not only in the high value of the production of a carefully regulated breeding — we are not dealing with the curs who "toil not neither do they spin" yet always manage to thieve a living and to reproduce themselves —, but also in the serviceableness of animals for States, and for individuals, the way of employing them in service, their use in agriculture, in hunting, and as personal protectors. Dog breeding, including upbringing, and lately training, provides, even if done only in an amateur way, as we have already shown, an additional source of income for many people, which cannot be despised, and which will become all the more certain and important, the more zealously the breed is pulled out of the wash of the Sporting breed to become a useful breed of social importance. In a small way, even the dung can be used by the dog keeper, for when dried it can be employed in the dressing of fine leather. Dog breeding further, has called into existence a number of business activities, where people work in small factories and even in large concerns, and earn their living either wholly or partly by them. I will only mention here the various firms who supply special food, equipment, medicine and other requirements. This too has given employment to printers, Art businesses, and various branches of industry. It demands, finally, the scientific breeding of service dogs, and therefore affords a fertile field of observation in the Science of Breeding. The widely extended system of Societies is occupied with a large number of Associations and Clubs, and gives work to a large number of employees, and affords a remunerative honorarium through numerous meetings and organisations, quite apart from the fact that the large organisations have attracted a considerable number of visitors from abroad. By the business of Exhibitions, by the dispatch of dogs which are sold, by journeys for breeding etc. the Railway has received a total of receipts which is by no means inconsiderable, and the Postal Department likewise has been put in the way of

appreciable sums through the large correspondence of the Societies and of individual breeders.

The unwritten duties of dog owners include in the first place the protection of the interests of our neighbours. Here unfortunately many of us are offenders; and carelessness is generally the cause, and sometimes even a lack of tact, with which the sixth Chapter will deal. Such lack of consideration for the quiet, the comfort and the feelings of our neighbours and associates show, in addition to the oft aforementioned great ignorance of the value and the use of the dog, the reason why he has still, unfortunately so many opposers and enemies.



Fig. 326. The municipal dog-catcher of Nish in Serbia.

JUDGING THE SHEPHERD DOG.

"The differences between certain individuals are very small. An ordinary unskilled person is not in the position to recognise the uncommonly fine differences between individuals, which an experienced breeder takes note of at once".

Ernst Haeckel,
Natural History of the Universe.



The judging of the dog should throw light on his external features, his physical fitness for work and for breeding, and at the same time, should inform us about the external recognisable characteristics of the foundations of his nature, and in certain circumstances, of his accomplishments. We will, however, put these last to one side, and I will confine myself to the critical examination of the body build.

A good judge must know the anatomy of the body and the science of breeding thoroughly well and, must be fully capable of determining what should be the nature and the duties of the race. He must be free from the narrowness of mind which confines its energies to the discovery of failings, or in biased preferences in relation to physical beauty, and he must finally remind himself that his sole duty is to serve the interests of the race, to secure sound conditions of keeping for the dogs, to promote their progress in breeding



Fig. 327. Herta and Hella vom Siegestor SZ 7554 and 7553.

excellence and efficiency, and he must not be influenced either by the ambition or greed of individuals, nor by the only too often ill-directed whim of the market. He must accordingly be steadfast and straightforward, he must not be distracted by the shrieks of the crowd, but must be reliable in his judgments. This again depends on his clearness of vision which can take in large views, without allowing itself to be distracted or to be influenced by side issues. It is only when he has succeeded in gaining a general idea of the animal as a whole, that he must turn his gaze to the component details. He must be able to balance the good points against the defects, and finally, he must decide exactly how far the former are a compensation for the latter in the interests of efficiency. This comprehensive acuteness of vision is the natural gift of very few, it can otherwise only be acquired by much observation and comparison, not of animals who are kept in a room or a kennel, but of dogs who are perfectly free to let themselves go and exercise themselves in play and work. This accounts for the reliability of experienced breeders when acting as judges. To such it is obvious that, as already said in the previous Chapters, observation of a dog alone is insufficient to enable anyone to lay down facts as to its race, purity or breeding value, as is so often believed and demanded by breeding novices. *These can only be ascertained from the Pedigree Table. The external features can only indicate whether the dog corresponds to the general characteristics of the race, and whether he is suitable for breeding so far as build and nature are concerned.*

We have already agreed that our shepherd dog is a service dog, and that he must only be bred as a service dog. *He must therefore, and the points of the race equally demand this, only be judged as a service dog. With service dogs, suitability ranks higher than beauty: indeed their real beauty and their only nobility (for their aristocracy is one of service), consist in their complete adaptability in the arrangement, the balancing and the coalescence of each and every part.*

The Science of judging of the service dog is based on that of the horse; in the case of the dog, however, it must differ in several respects, for this reason especially, that the dog is not a weight carrier nor a beast of burden like the horse. For this purpose the horse has a close well-knit build, while our shepherd dog has the supple bending body with the pliable ligaments of the beast of prey and of the galloping robber, whose descendant he is. He must then be able to insinuate himself through bush and undergrowth, and must know how to draw his body through small openings and narrow tunnels. Such an animal must be made quite differently so far as sinews and ligaments are concerned, from the swift-footed runner with his closely-knit body build and his taut muscles. The ligaments of the dog must not be flabby, nor weak; they must be pliable and always elastic, and be able to follow and adapt themselves to every turn and movement of the dog.

The experienced judge of the dog knows that nearly all the faults of standing can be seen in one and the same dog, when looked at in a cursory manner only. He knows, further, that it is not easy to stand a dog correctly on all four legs, to keep him so and to lead him properly when showing his paces. The means which the rider and the leading groom can employ are impossible when dealing with a dog. Unfortunately, either through indifference or through lack of "nous", only a very few dog leaders lay stress on this point which is most important when judging a dog. They think that they have done enough when they have induced the dog to lift up his head and to prick up his ears. Thus a hasty observer, when making a cursory examination of a dog can find faults in him which do not belong to him at all. This is often the cause of the somewhat unfortunate general reports of the technical press which is mostly written by interlopers, or (as it is termed in our very best Judean Journalese) by "box-judges", that is to say by those "experts" who may have seen the dogs lying in their boxes, or at the most, if they took the trouble to condescend to cast a glance at the judges' ring, may have recognised a dog or two from the outside of the same. By casual standing, boredom and looking round, one and the same dog can change and show contradictions, such as turned out elbows, a "French dancing master's stand", cow hocks, or bandy legs, to be overbuilt or to have buttocks who which fall away and give a wrong leverage of the limbs. I will explain further on what all these technical terms mean. If the dog does not stand evenly on all four feet, or if he stands with a front leg a little advanced, the setting of the shoulder then shown will obviously not be correct and natural. It will appear steeper because the dog has produced a short extension of the "upper arm". The same is the case with the hindquarters, while the eye of the spectator is liable to delusions, as is well known.

In what follows, I shall have ample opportunity to go into the question of measurement and to give certain dimensions. That, however, must not be considered a demand that the judgment of the dog should be based on the results of measuring sticks and tape-measures. Measurements can and may afford useful starting points, because well-proportioned dogs are generally overestimated, and the phenomena of a stork-like build are easily underrated but only the eye that makes the comparison can then make a conclusive judgment possible, because the sure eye alone can recognise whether *the individual parts stand in a correct relationship to the whole*.

There is no conclusive formula for reckoning the intrinsic value of the various parts of the dog's body. They may indeed give starting points to the beginner; but they can only too easily lead to a hide-bound emphasis on certain peculiarities, to which the novice is only too eager to pay too much attention, without this to help him. When judging, only the broadest of views which takes in all the points at once of our breeding, will be of any use to our race.

The following can at anyrate serve as a starting point in the estimation of the features of the dog:

Shepherd dog nature and expression	20	Marks
General appearance	15	"
Gait	15	"
Bones and Muscles	10	"
Back	7,5	"
Hindquarters	7,5	"
Forelegs	7,5	"
Chest	7,5	"
Head	5	"
Hair	5	"

The head, in this calculation, is judged on serviceability, on strength and the teeth. The shape of the head and the nobility of expression are included in general appearance, as are carriage of the ears and the tail. If these points are not good, they detract somewhat from the whole. The quality of the gait is deduced from the harmonious working together of the hindquarters, the back and the forelegs.

The SV has published special instructions for the Show valuation of the shepherd dog. *The basis of the judgment must be the service which is demanded of the dog:* shy weak-nerved animals are to be marked as injurious to the breed, even as over-bred dogs that are not true to the racial type, whose height reaches or even exceeds the total length. In addition to a good shepherd dog expression, a lively disposition, a long solid well-knit body suitably-proportioned for service, not spongy nor bulky, whose form guarantees a stretching out and swift gait, with powers of endurance are among the very first qualifications. In the case of bitches, solidity is to be preferred to beauty. Phenomena of over breeding, bitch-like forms in the case of dogs, and the fading of the colour of the coat are injurious from the point of view of breeding, and are to be marked accordingly. Defects in body build and in gait, defects also in the teeth, the jaw and the body covering are all to be marked under the General appearance of the dog. The cut of the head, the carriage of the ears, and the tail, the constitution of the hair, the general colouring, and the colour of the eyes may also exercise an influence in marking, but not on the resultant general examination. Short- or stumpy-tailed dogs are to be rejected for breeding purposes; albinos, i. e. pure white dogs with red eyes and flesh-coloured noses are dismissed as harmful to the breed without further ado.

In what follows, I will give first of all the picture of the skeleton of a shepherd dog — it is that of Siegfried von Jena-Paradies, formerly Barbarossa 1339 KrH SH PH, Sheep Tending Champion of 1906 —, then the drawing of a model dog, and both of them will have the names of the chief parts of the interior skeleton and of the external features.

The judging of the general appearance, expression, and nature follows after the dog has been led around quietly, in order to obtain

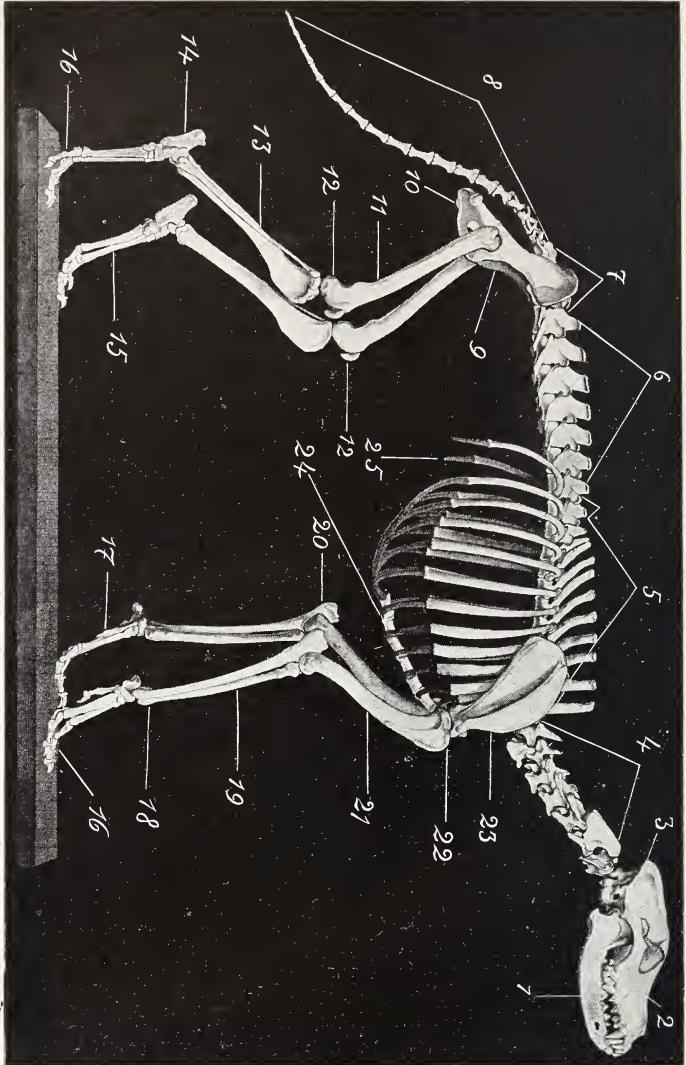
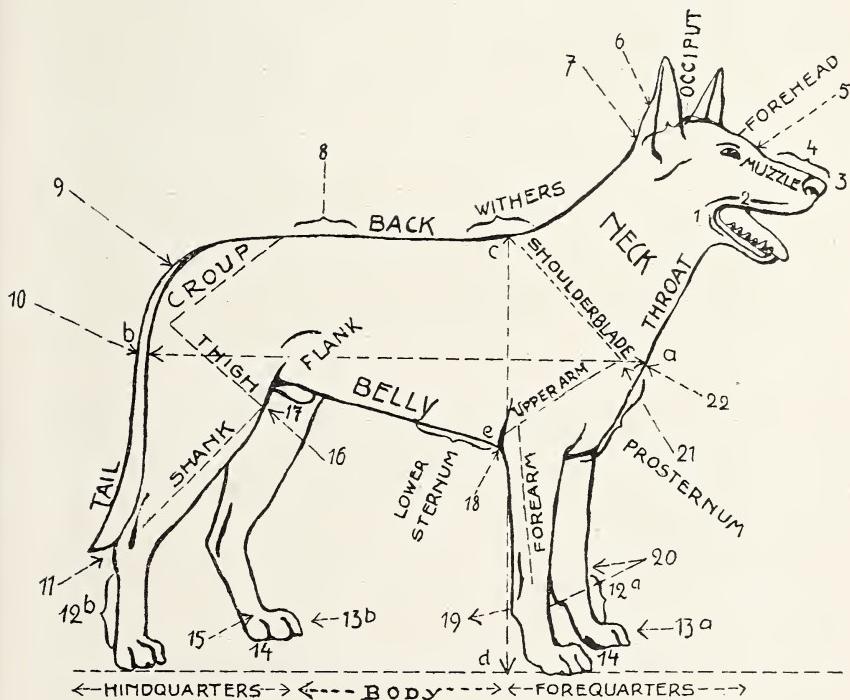


Fig. 328. The Skeleton of a shepherd dog.

1. Maxilla (inferior).
2. Maxilla (superior).
3. Occipital.
4. Cervical Vertebra (7).
5. Dorsal Vertebra (13) with Spinal Process (Withers).
6. Lumba.
7. Sacrum.
8. Coccygeal Vertebra.
9. Ilium or Pelvic Bone with Hip-joint.
10. Ischium with Ischiun Tuberosity.
11. Femur.
12. Knee-joint with Patella.
13. Shank bone, with Tibia and Fibula (outside).
14. Hock with Ankle bone.
15. Metatarsus.
16. Phalanges.
17. Metacarpus with the atrophied 5th inner toe (Thumb).
18. Root of the Fore-foot Joint.
19. Bones of the Fore-arm (Radius in front and Ulna behind).
20. Ulnar joint.
21. Humerus.
22. Shoulder joint or Shoulder bone.
23. Scapula blade with ridge.
24. Sternum with protecting ribs (10).
25. Floating ribs.

a general impression. He is then made to stand and some of his single characteristics are examined. The judging when the dog is on the leash should best take place on an even firm surface; when this is not possible, one must avail oneself of the help of boards. For the purpose of this examination, the dog must stand on all four legs so as to distribute his weight evenly. The forequarters must be



A-B=LENGTH of the DOG. C-D:SHOULDER HEIGHT C-E DEPTH of BREAST

Fig. 329. The Model dog, sketch of the different external parts.

(Scale 1/10 of actual size.)

1 Corner of lips (mouth). 2 Lips. 3 Nostrils. 4 Bridge of the Nose. 5 Frontal arch. 6 Inion. 7 Nape of the Neck. 8 Loins. 9 Root of the tail. 10 Ischium Tuberosity. 11 Hocks. 12a Metacarpus of the fore-foot. 12b Metatarsus of the hind-foot. 13a Toes of the fore-foot. 13b Toes of the hind-foot. 14 Ball of the foot. 15 Place of the wolf's or dew-claw. 16 Knee-joint. 17 Penis. 18 Ulna. 19 Wart of the digging leg. 20 Root of the fore-foot joint (often, but incorrectly called the front knee). 21 Shoulder joint. 22 Point of the prosternum.

perpendicular from the withers, the hindquarters must stand easily and naturally, being slightly drawn back, but never over-stretched, nor unnaturally placed in a special position. In this free natural condition he must be held during the whole of the inspection and he must not be allowed to sit, to lie down, to walk round, nor to strain

himself forward on the leash. He must also not be held up by the collar or the leash, or made lively by any little tricks.

In his general appearance the dog must correspond to the racial type in size, strength and shape. In this respect also it is to be observed whether dogs or bitches show the appropriate hallmarks of their sex which were described in Chapter 3; the more powerful body-build, the stronger teeth, the more powerful head and the beginnings of a mane for the dog, and the finer slimmer form for the bitch; the more pronounced these features are, the more favourable will be the verdict as to suitability for breeding.

The racial type allows about 24" average height for dogs and bitches with about 2" allowance either way. These dimensions are to be aimed at for all medium sized service races as correct, whether the dogs are used for the flocks or for any other service. The service dog, like a good cavalry charger, must be indefatigable, enduring, and capable of maintaining a persevering, even, quiet, but also a rapid gait, that is to say a trot, and also a gallop. Further, he must be mobile, capable of turning easily, and skilful in overcoming obstacles, whether by jumping or climbing. For this it is necessary to possess a certain size combined with strength.

Dogs being conspicuously smaller than the average animal, lack this strength whenever they are proportionately built, because they are too light in build; or else they stand ponderous and thickset, but on small legs, in which case they lack endurance and power of movement.

The same is true with animals that are too large. Physical size exercises great influence on ability to move, for with increase of size, weight grows more in proportion than the strength available for movement, which depends on the density of the muscles, and thereby suffers not only in that particular part of its service which demands endurance, but also in the suppleness of the body, and the power of making quick and sharp turns, sudden stops, and the surmounting of obstacles. Increased weight exercises as well a strong pressure on the supporting frame of the skeleton which affects the bones themselves, as well as the ligaments and muscles, for the carrying capacity of the bones is determined by their diameter, and this again does not increase in proportion to the total weight. An excess of size, is, as we saw, in the case of under-size, an unserviceable feature for breeding. If the oversized dog is proportionately built, the strength of his bones must correspond to the size, for much dead weight is thereby created which so seriously burdens the dog that his powers of endurance, his speed and the smartness of his movements suffer in all circumstances. Giants are never nimble, the ligaments soon give under the weight of the bones in times of hard work, especially in the forelegs on which they fall heavily at every step. Such dogs then use themselves up quickly when they are eager and full of ardour. They are, however, generally,

lazy and easy-going and for that very reason are already unfit for service. Sometimes the size is also founded on an inequality of body build if the dog is too large in his forelegs, he falls away back like an hyena. Apart from this loss of symmetry, the hindquarters then are generally not strong enough to impart sufficient impetus to the fore-quarters. If, however, the excess of size is caused through the height of the limbs, the serviceableness of the dog will be even still more decreased, because in this case, the position and the constant leverage of the legs is bad, the stepping forward is bound, the impetus is not sufficient, and the chest development of these generally stork-like animals (which are not infrequently too fine-boned as well) is defective.

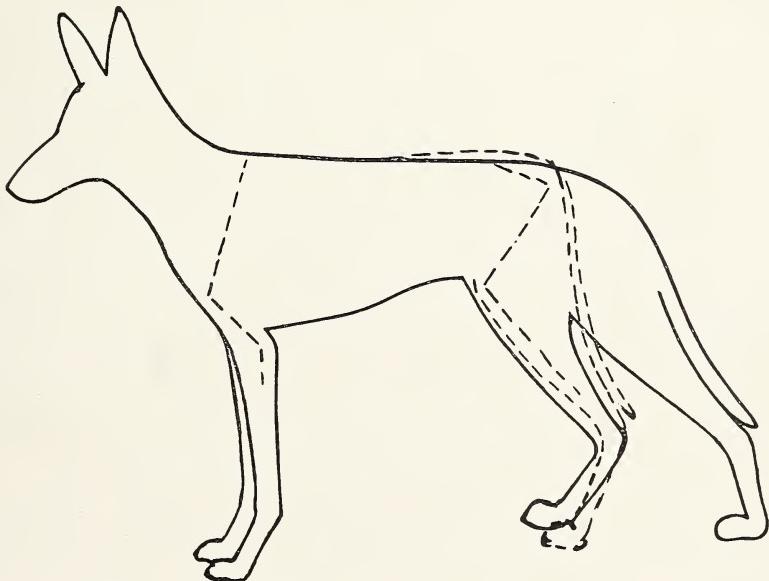


Fig 330. Under- and over-bred shepherd dog.

With such dogs, as the result of the steep position of the limbs, the relation between the length and the height is generally altered for the worse; their length is no longer greater than their height; but the height of the back is equal to the length over all, even if it does not actually exceed it. Dogs who are thus made, cease to correspond to the racial type. They may indeed look very fine dogs, but they are no longer shepherd dogs, because the suitability for use is absent from their body-build. Indeed, we can no longer consider them "beautiful", when we, following Wilhelm Jordan, make clear to ourselves that perceptible suitability is the apogee of all beauty, which, however, never finds expression in the build of such a dog. If the legs indeed are slender in the bone and stork-like, then a good muscular development is also wanting; and a serviceable skeleton is out of the question.

Dogs with such a build in any case are valueless and may never be used for breeding. They transmit their physical defects very stubbornly; the most that can be expected of them is to turn them into goods for export. Such dogs, thanks to their long bones, often give the false impression that they have a good ground covering gait, and so they impose on some novices, because they throw out their legs, but in reality they cover no ground behind, because the too obtuse angle of the shoulder counterbalances the advantage of the long leg bones. If therefore the free play of the shoulders is already hindered, the hindquarters must also step short, mincingly and jerk upwards, instead of making a forcible propulsion; or the dog would otherwise, as the result of his too short back, overstep, that is he would tread on his forelegs with his hindlegs. Therefore he cannot even help himself by making the hindlegs turn out at the side, as I have explained in Chapter 1 in the case of the wolf's gait, because the short stiff back does not permit of this. Such dogs are absolute dazzling frauds, and a danger not only for novices; but for the race as well. A clever showman will try to exhibit them with outstretched hindquarters, and thereby to give the false idea of greater length and good formation. When a judge does not allow himself to be thus taken in, but will ask to see the dog in an unextended position with the hindquarters in a natural position, then the bad generally over-built and shaky hindquarters are seen with all their defects; such dogs above all cannot survive a careful testing of their gait. The foregoing illustration shows us such a new fashioned super-dog; it is cut out from a picture of the animal in question. The dotted sketch of the hindquarters (Fig. 330) shows how the dog would stand in a natural position without any placing and explains what has just been said. The dotted lines in the fore-and the hindquarters give the location of the bones and show the bad angles, about which more will be said later on.

The height of the shoulder or the back of the dog — there is no other method of measuring the size — is taken when the animal is standing evenly on all four legs. This is shown in Fig. 329 by the line C—D, which begins on the highest point of the withers — see also the picture of the skeleton — and drops at right angles through the elbow to the ground.

This height is considered as a standard measurement when it is measured with the hair pressed down and not standing up, if extended to the head, or the neck when held up, this would give a faulty and over-measurement of from $1\frac{1}{8}$ — $1\frac{3}{4}$ "". There are indeed some "experts" who take the measurements from the tips of the ears, which again is dependent on the lifting up of the neck; but this must be borne in mind when encountering some disproportionate dimensions in some dogs. In spite of the clear examples given in the Racial Type, and in spite of all information, some shepherd dog owners are unfortunately still always labouring under "megalomania". They believe that their dog is all the better when it is possible to add a few more notches on the measuring rod, or to cheat. Whoever has no proper measure for using with small animals must rely on his own resources, and

lay a light piece of wood or something similar level over the withers, against which a stick must be placed as high as the elbow, and the distance to the ground can be read off by a measuring rod. The under edge of the board will give the shoulder height of the dog. Dogs are not so easily measured, because it is difficult to make them stand evenly on all four legs, and because they are always mistrustful of all fussing about with their bodies, and will duck or shy. In order to obtain the most correct measurement, one must measure several times, and take an average of the results. It is easy to over-estimate the size, especially in the case of thickset dogs with a good coat, while in the case of high-legged dogs with a small chest development, the eye is only too prone to allow itself to be deceived by the large amount of ground under the dog, and by the corresponding slenderness of the body.

The shepherd dog should be a drawn-out dog, whose total length exceeds the shoulder height; he should, in other words, cover much ground. According to Ströse, the proportion of 10—9 between the length of the trunk of the body, and the height of the shoulder is the most favourable for forward motion. A length of trunk of $23\frac{1}{2}$ "— $27\frac{1}{4}$ " which is generally found in average shepherd dogs would correspond to a shoulder height of from $21\frac{1}{2}$ "— $24\frac{1}{2}$ ", and with this we arrive at the desirable proportions for service dogs. In the picture (No. 329) of the typical dog, which was drawn after a former champion to 1/10 the size, the proportion between length and height is as 10 is to 8.8. The measurement of the length of the trunk of the standing dog is taken from the point of the prosternum to the ischium tuberosity, see line a—b in figure 329. To take this measurement, a measure for small animals must most certainly be used, that is a measuring rod, which is graduated, and with two adjustable arms made to fold and unfold horizontally. The dog to be measured is clamped between the two arms, because every bend in his back which he will most certainly make, or at least which he will try to make, will reduce the length. The measurement then must be taken most carefully, and the average from several measurements ascertained.

In addition to the right size, the service dog must have sufficient strength; which lies in the bones and the muscles. A working dog must have strong bones. The weight of a dog's bones is about 14% or 1/7 of the total weight of the body. At first, this will not appear to be very much; but it is so when we remember that speed, power to turn, and great endurance are demanded of the dog. All these features are minimised by an increase in the weight of the bones as the result of a general increase in weight and the disproportionate thickness of the bones. Too light a frame may involve general weakness. Large bones on the other hand, hinder mobility and endurance, because they overload the dog with his own weight; and they are generally spongy and soft. The frequently eulogised "giant's bones" are thus only a very small advantage for a shepherd dog. An improvement secured by breeding produces a more closely knit bone structure through the refining of the bone substance; while

over-breeding on the other hand, produces, as we have seen, bones which are either too fine, too brittle; or else too clumsy. Careful breeding not only produces more elegant bones, it also tends to extend the leg bones, which, again, has a favourable influence on the



Fig. 331. Prinz von Massing : SZ 1032 HGH.

action of the muscles. Short leg bones give a stocky, thickset body-build; and dogs who have such, lurch forward, but do not run. On the other hand, long standing leg bones in good condition are favourable, as we shall see, for forward movement; and such bones enhance the

nobility of the external appearance. All noble people, and all who are well bred, are long legged with slender but well compacted limbs; and it is so with other noble breeds. Prinz von Massing SZ No. 1032 HGH, whose photograph is given in the preceding picture (No. 331) had a splendid service dog body build, with an expression to match. He was of the best country breed, in which the bones were of fairly good solidity. Unfortunately no breeding-through after him took place; if it had, a still more serviceable body build would have been the result within a very short time. As a further example of careful



Fig. 332. Jung Tell of the Kriminalpolizei SZ 24511 PH, Champion of Holland 1913.

breeding-through of service dogs from former times, we have the picture of Jung Tell von der Kriminalpolizei SZ No. 24511, Champion of Holland in 1913.

The muscles, whose length and breadth are regulated according to the condition of the muscular attachments to the bones, should be firm and like the tendons and ligaments, in hard and taut condition. The lifting power of the muscles is less than the path of travel, because the dog was not made for weight carrying, but for

speed and endurance. The emphasis therefore must be laid on their length rather than on their thickness. Further, long muscles must have long bones, and the limbs must be in a suitable position. In discussing them, we shall see how in every condition movement and endurance supplement each other at certain special points. The shoulders, like the hindquarters, should therefore not be evenly covered with abundant rolls of flesh, but should be firm, so that one can feel the lines of well-developed muscles. They must be felt for because, one cannot see them in long-haired dogs.

I said above that the dog must also be judged as to whether he conforms in a general way to the racial type externally, and whether his various parts show this correspondence too; and I maintained that the experienced eye should not discern too much or too little in any one place, and that as the result of this the harmony of the body build can be asserted in a general way.

This harmony of form, by which the body attains to its highest perfection, which means too the radical, full development in health and efficiency of the whole race, and of the individual animals (which depends on their right relationship to the whole) we call nobility of appearance. This nobility of build, when rightly understood, secures also the maximum efficiency of the available strength, and guarantees the highest efficiency with the lowest consumption of energy and material. Only the thorough appreciation of this fundamental principle will secure the attainment of the highest end. Nobility is the contrary to over-breeding, which is devoid of nobility because the shepherd dog expression has been lost; it only produces malformation and ends in caricature. We aim at nobility because perfection of the body-build, firm and finely moulded; a form nowhere overladen, taut muscles, blood and spirit increase the efficiency of the service dog. We abominate overbreeding, because it makes both body and soul unsuitable for work. I have already said in the Third Chapter that we cannot speak in the case of shepherd dogs, as in other races, of full-, half- and cold-blood, because the good country stock carries full blood as well, and has a much better and more suitable strain than the degenerate town breed. We wish therefore that the despised title "Peasant shepherd dog" should gain a footing for our country stock. It is true that, taking our service dogs as a whole, there is still something, and often much, that may be improved. Whoever takes the trouble to go into the matter sufficiently will indeed find the foundations of a good body build nearly everywhere, and only waiting to be roused from its beauty sleep by breeding. It is this humble working stock that possesses blood, life, fire and the shepherd dog soul.

It is impossible to express in words the meaning of "shepherd dog expression". The correct expression and the emanations from the shepherd dog's soul must be learnt from the dog himself. I have already said much about the soul and the character of the shepherd dog. Indeed, there is nothing very much which can be learnt from a cursory examination of the dog; what is learnt is but the starting

point from which the essential facts must be deduced. We already can tell from his manners what kind of a dog he is, how he moves and whether he has life, blood and nerve. In service these can compensate for certain deficiencies in build, because even the most perfectly built dog is of no use if he does not possess the incentive to give of his best and of his uttermost. The gait must be energetic and springy, unaffected by weather and former exertions; the character must be firm, daring, fearless, observant, wide-awake, but not mercurial, playful, weak nor shy. The eyes tell the most; they should show no malice nor treachery, no unrestrained wildness, but also no sleepiness and languor, and no fear. The shepherd dog should appear to the observer straightforward, bold, open, but reserved, his eye should not flinch, nor avoid the gaze of the inspector moodily or in craven fear. The play of the ears and the carriage of the tail and the general deportment of the dog, his behaviour towards other people and other dogs, in the face of unforeseen circumstances, or scenes, as well as the expression of the eyes afford the experienced psychological observer the means of realising clearly how much of the essential shepherd dog spirit he has before him.

I will now turn to review the separate parts of the body of the dog — while he is standing — and will begin with the head, not because it is the principal part, but because it serves as a beginning.

So far as this is concerned, it may appear as if the formation of the head were more or less a matter of indifference for the service dog, so long as it conforms to the racial type in a general way, but we shall see that there is an intimate relation between the formation of the head and the service of the dog which, must not be disregarded in making any examination. The head, with its bones, must supply foundation, accommodation, and protection for the brain, and for the chief senses it contains, such as the smell, hearing, and sight. The dog uses his head as the means of taking nourishment, the wild dog uses it as a means of acquiring food; but with the shepherd dog, it is the instrument for discharging his duty. In service, the head is used in a double relation, i. e. through the working of the brain which is the result of the reception and estimation of the impressions which it receives; through the use of the teeth; and in certain cases, through the use of the voice.

The bony framework of the head, the skull of the shepherd dog corresponds, as we saw, to that of the wolf, except for a few fundamental deviations due to a branching off from the family, and to domestication. With the exception too of certain alterations, which are not radical, but induced by domestication, our shepherd dog has inherited a genuine wild-dog head, which that Queen of Artificers, Mother Nature herself, has bred into him as the most suitable for his duties. The drawn-out long-skulled wild-dog form is also the best for the shepherd dog. It secures ample room, for the brain, which is the seat of reasoning, and affords the sensory nerves, and above all those of the smell, which is the most important sense, a safe position and place for development. It gives, finally, in the jaw formation

which is adapted to the working of a long jointed, and therefore especially strong gripping jaw, guarantee for a firm grip to the dog who works with the flocks, or for a secure hold to the dog in the Official Security Service, or who acts as guardian in a private capacity. This skull formation also allows of long and strong muscles with suitable places for attachment. Unrestrained breeding for "Sport", — and in the case of shepherds too, such a spoiling has taken place as a goal to be aimed at, — has bred in an elongated fine drawn out head. Dogs with such heads, in which a small brain pan scarcely even provides room for what brain there is, remind one of those ladies' dresses without pockets, which were generally so unpopular with the male sex. Indeed the mental dulness found in the unfortunate possessors of such heads is in general the result of breeding and keeping in a kennel in penal idleness, which is a *sine qua non* for the breeding of a canine Venus or Adonis.

When a dog has such a long skull, the length considerably exceeds the breadth, by about double, the skull proper. The brain pan should be in a proportion of 10—6 to the face or front part; this proportion, however, is liable to variation. I have found it changing to 7—6. These measurements are, however, made on the skull; if made on the living dog, the tip of the nose and the lips must be included, which naturally changes the proportion of the length of the face with regard to the head, in favour of the former. When the measurements are taken on the skull of a living dog, the face part should be somewhat shorter than the skull part; an over-elongated muzzle gives an over-developed mouth which looks ridiculous and is unserviceable. I would here therefore, utter a warning in taking such head measurements on the skull of a living dog, or else I would accept the information which is unfortunately sometimes given "with a pinch of salt". Such measurements are absolutely valueless already because no guarantee can be given that they were made even with approximate correctness, and care. Only very few people know how to take skull measurements; and for the taking of the external over-all measurements, there is no criterion at all, apart from this. The length of the head has no significance; and even what appears to be long, can in reality be still short for the dog concerned. Such statistics of measurement are to be considered bare-faced cheating, or, at the most charitable estimate, windy boasting. There are no regular standards of proportion for the head. Each head, as well as all other parts of the body must be tuned to the general harmony of the body-build, which, as we saw, is quite different for dogs than for bitches. Further, a large powerful dog must have therefore a stronger and apparently heavier head than a small light built dog, without at the same time being the possessor of a "fat head". It is not the measurements which give the cachet of nobility; the beautiful form of the head, when it is good, no doubt enhances the general impression made by the dog, but what really matters is suitable formation, and the cut and the line of the contour.

In spite of the unchanged hallmarks of the skull, through thousands of years, as already proved, yet within these limits, the formation

of the skull of the shepherd dog is as liable to variation as that of the wolf and his species; and as there, so too it is the case within the same area of propagation. Considerable deviations occur not only in length, which influence the proportion to the breadth, but also in the breadth which show themselves in certain skulls in the development of the frontal cavity and the cranial ridge. Such deviations also leave their mark in the external features; we can therefore distinguish between a shorter, compacter, more bullet shaped, and an elongated noble wedge-like head. This latter is the more suitable for service, and it is obvious that it is more pleasing to the eye. The elongated head which obviously must have sufficient strength and depth as well as length, favours a secure hold, and a firm grip, and gives a noble impression by reason of its well-knit formation. The heavy, full head, which is generally found in conjunction with a coarse unserviceable body-build, overburdens on the other hand, the forequarters with the weight of its bones, quite unnecessarily and, in spite of its thick muscles, it has not the security of grip and the biting power of the longer head.

I said above that Nature had moulded for the wild-dog skull the most suitably elongated shape for its possessor. The constitution and the weight of the bones are not invariable; it depends very much more in its inner formation on the pull and the pressure of the muscles attached to them. The disproportion of the wolf's skull can, as was already shown, in the 1st. Chapter, be attributed to this, that in the wolf we have a race which is still young from the point of view of development; and which interiorly has not been well bred and stabilised. This lack of consolidation then favoured a change in the formation of the skull of the domesticated dog which, under the influence of domestication, was very large in certain races and reduced their efficiency. This alteration shows itself generally in the face portion, and is caused by an infrequent use of the molars and the incisors, and also of the jaw, as well as the formation of a pronounced break in the frontal line which is neither observable in wild dogs, nor in shepherd dogs. This break occurs in the olfactory region, the place where the olfactory nerves especially receive their impressions from outside. The elongated even full formation of the skull favours therefore the efficient functioning of the fundamental sense of the dog.

It therefore now remains to note and distinguish which form is the best for the development of the brain as the seat of the mental faculties. The brain is situated in the skull in the cranial cavity or brain pan, but, exercises very little influence on the external formation of the head. The length of the head, however, is determined far more by the extension of the jaw and the development of the occipital bone, and its breadth is effected by the shape of the zygomatic arch. Its depth in the facial region, finally, is influenced by the slope and the strength of the jaws, but in the skull portion it is affected by the development of the ridge of the cranium. The muscles complete the expression. The more contracted the head is in the skull portion, the shorter and the thicker must the muscles be. The more

elongated the formation of the head, and the longer the muscles, the thinner will be the flesh covering on the bones of the skull. The ridge of the cranium develops itself further in grown-up dogs, the epicranium appears to be more thickly covered with muscles, in the case of older dogs, one can sometimes therefore speak of a head "out of joint".

According to Hauck's calculation, the capacity of the cranial cavity does not grow in proportion to the size of the body, and not even according to that of the head. Dogs, accordingly, with long, small heads have no, or hardly any appreciable smaller skull capacity than animals with a broad head. The weight and size of the brain stand indeed in a certain relation to mental capacity, but comparisons can be made or conclusions drawn only from the estimation of the general efficiency of the various members of the same genus, when compared one with another. But, within the same species, the weight or the size of the brain exercises no influence on the mental development or the capacity, although the fine construction and the size of the cortex of the brain, or the grey matter may lead to considerable differences with regard to the extension of the upper surface of the brain through the varying number and depth of their ridges and convolutions. According to Ranke and Broka, the development of the frontal lobes or folds of the cerebrum as the seat of mental activity stands in a direct relation to, and in intimate connection with, mental efficiency. We will here call to mind what I said in the 1st. Chapter, after Studer, about the enlargement of the frontal lobes of the domesticated as compared with the wild dog, and we must further remember what I said in Chapter 2, relying on Erdinger, of the great increase of the frontal lobes in the ascending order of animals, and their influence on their considered conduct. We therefore, wish to consider in detail the dog's skull externally, and internally, and the muscular covering. Unfortunately it cannot be said with any certainty, from which long skulled dog race, the pictures I—V of the skull were made.

These pictures show first that the brain pan may have a negligible influence on the external formation of the skull. They establish, further, that breeding to produce an elongated but still powerful service dog head can lead to no loss in the quantity of the brain, because the brain pan, and the inner cavity of the skull are not affected by this. This apprehension was formerly often entertained, and is even to be heard occasionally to-day with reference to other races—it is mostly propagated by owners of blockheads—but is, as we see, absolutely without foundation. What causes the head of a shepherd dog to appear to be coarse and ignoble is not an increased distension or elevation of the skull cavity, no supposed augmentation in the space for the brain, but it rests on circumstances which are purely external, such as a bad proportion between the length and the breadth, large bones, an especially pronounced ridge of the cranium, a large over-hanging zygomatic arch, and lastly, thick layers of short muscles, especially those of the temporal muscle and the manducator. The bulk and the most valuable part of the brain is not situated just there

where the "fat-head" advocates imagine, not behind and above, between the ears, and also not in the cheeks, and consequently not at all in those places, which because they are large, give the dog a thick-headed appearance.

Purposeful breeding, as we saw, forms, from a large spongy bone mass, a firm fine frame, and from short thick rolls of muscle, long hard ligaments. It does away with the thick cheeks and the unlovely vaulting of the head in the region of the ears.

- I Os occipitale, occipital bone.
- II Os parietale, parietal bone.
- 2 Processus interparietalis, Process of the interparietal bone.
- 5 Crista sagittalis, parietal ridge.
- 6 Sutura coronalis, coronal suture.
- 8 Tuber s. eminentia parietalis, highest point of the vaulting of the parietal bone.
- 9 Platum temporale, temporal surface of the parietal bone.
- 10 Linea semicircularis, frontal slope.
- III Os frontale, Coronal bone.
- 12 Processus zygomaticus, zygomatic process.
- 13 Fossa frontalis, frontal cavity.
- 17 Sutura frontalis, frontal suture.
- IV Os lacrymale, Lacrimal bone.
- V Os jugale, zygomatic bone.
- 23 Processus temporalis, temporal process of the zygomatic bone, zygomatic arch.
- 24 Processus zygomaticus, zygomatic process of the temporal bone, zygomatic arch.
- VI Pars squamosa oss. tempor. temporal bone squama.
- VII Os nasale, Nasal bone.
- VIII Os maxillare super., Upper-mandible
- IX Os intermaxillare, Intermaxillary bone.

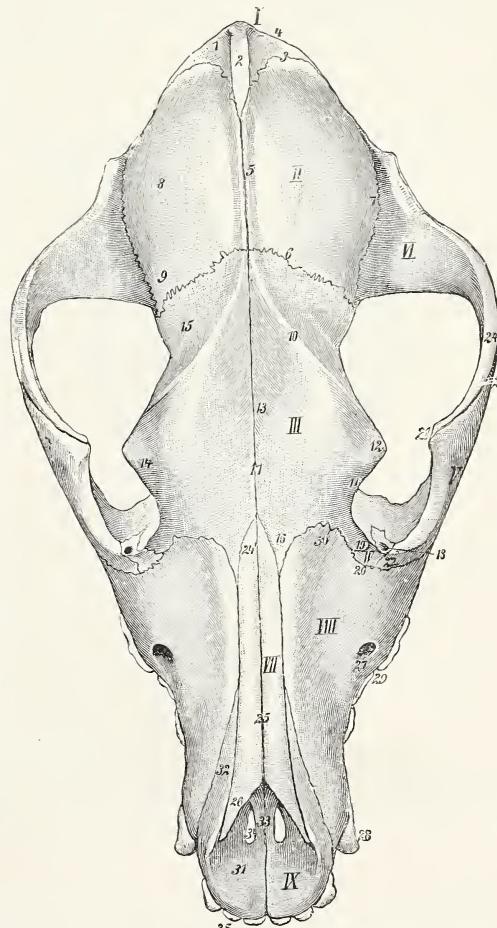


Fig. 333. I Skull of a dog, seen from above (block from Ellenberger und Baum, Anatomie des Hundes, 1891, published by Parey, Berlin).

The finely chiselled head already creates a favourable impression, and as a result, a nobler appearance. When this purposeful breeding for the elongation of the head occurs, this generally takes place in the face portion, in the muzzle, and increases there, as we saw, the adaptability for service to a certain extent, of which we shall speak later on.

So far as the elongating of the head has anything to do with the brain pan, it also causes an enlargement of the cranial cavity, and that too in the direction of the frontal cavity. This augmentation of the brain would then especially benefit the frontal lobes, which, as we saw, are so important. Such breeding would then afford and complete what, according to Studer, domestication has already introduced. The increase of the frontal lobes took effect first in the frontal cavities lying forwards in the direction of the nose in front of the brain pan.

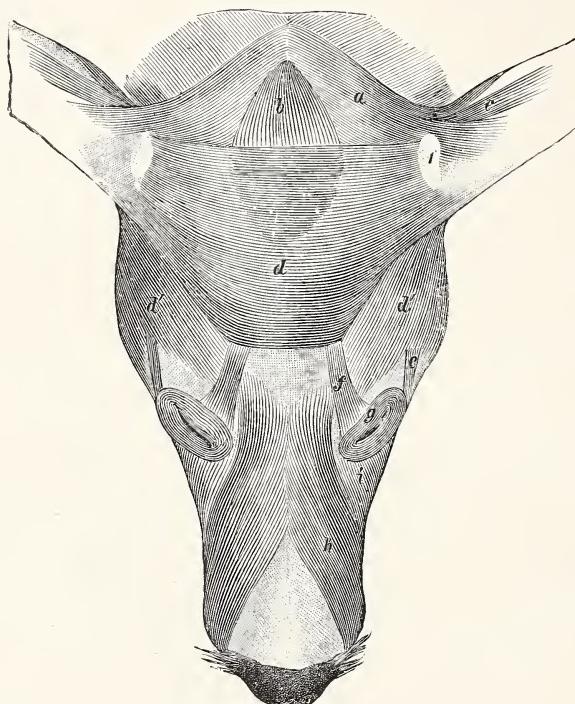


Fig. 334. II. Head muscles of a dog, upper layer, seen from above (block from Ellenberger und Baum, Anatomie des Hundes, published by Parey, Berlin, in 1891).

of the occiput, and the zygomatic arch, to the submaxillary protuberance, and works with the chewing muscle, the *M. masseter* (see No. 360, IV. 1), and with the pterygoid, which lies on the inner edge of the mandible to work the lower jaw. The other muscles in this upper layer e–i belong to the eyes, the skin of the face, and the upper lip.

These cavities which are simply for conducting air, and have no connection with mental activity, gave way forwards and backwards before the pressure of the increased mass of the cerebrum. All this produces the frontal vaulting (*eminentia frontalis*) which is easily seen in Figs. III and V, but is not more particularly indicated

1. Thyroid cartilage.
- a. *musculus levator auris longus*, long ear-raising muscle. This muscle is part of the *M. retrahens*, the retractor muscle of the ear orifice.
- b. *M. occipitalis*, occipital muscle which lies on the *M. temporalis* (temporal muscle), and partly on the *M. attollens auris* (the muscle which lifts the ear, when the orifice is drawn side-ways or backwards).
- c. *M. transversus auricularis*, which extends the shell of the ear.
- d. *M. intermedium scutularum*, part of the *M. scutularis*, the retaining muscle of the shell of the ear, which raises the shell of the ear. The *M. inter. scut.* partly covers the *M. occip.*, and (with the *M. frontoscutularis*, which is also part of the *M. scutularis*), entirely covers the *M. temporalis*. This temporal muscle is the strongest on the cranium, it extends on both sides from its attachments on the frontal ridge, the crest

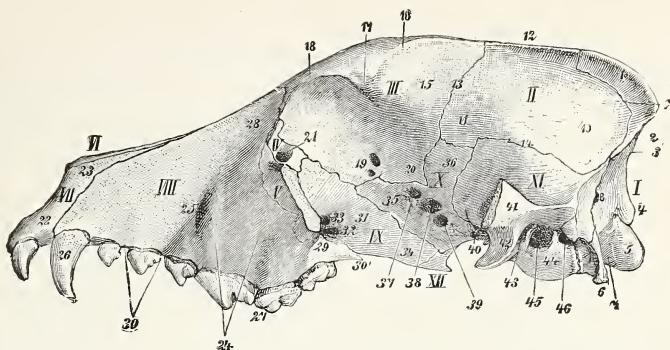


Fig. 335. III. Side view of the skull of the dog (block from Ellenberger und Baum, Anatomie des Hundes, published by Parey, Berlin, 1891.)

I Os occipital ale, occipital bone. II Os parietale, parietal bone. 1 Processus interparietalis, process of the interparietal bone. 12 Crista sagittalis, ridge of the crown of the head. 16 Linea semicircularis, ridge of the forehead. III Os frontale, frontal bone. 18 Planum temporale, surface of the temporal cavity. IV Os lacrymale, lachrymal bone. V Os jugale, jugal bone, (sawn off). VI Os nasale, nasal bone. VII Os intermaxillare, intermaxillary bone. VIII Os maxillare, super, Maxilla superior. IX Os palatinum, palatine bone. X Os sphenoidale, sphenoid bone. XI Os temporum (squama) temporal bone. 41 Processus zygomaticus os temp. zygomatic process (sawn through). XII Os pterygoideum, pterygoid bone.

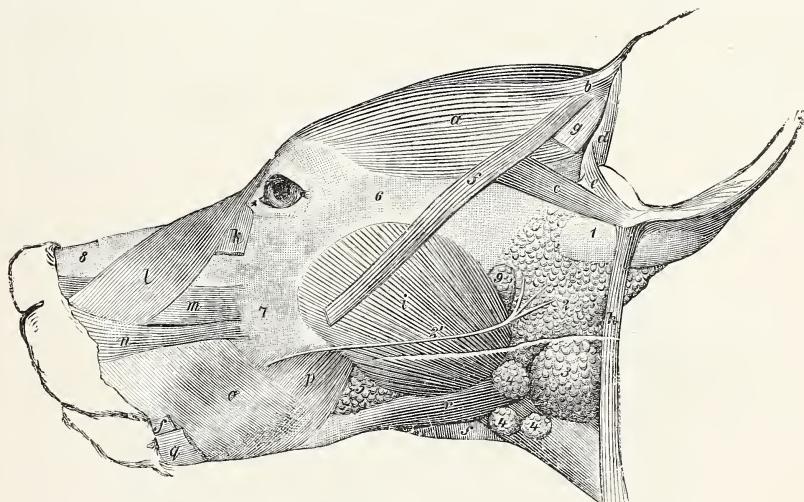


Fig. 336. IV. Head muscles of a dog, upper layer, side view. (Block from Ellenberger und Baum's Anatomie des Hundes, published by Parey, Berlin 1891.)
1 Foundation of the ear muscle. 2, 3, 5 Salivary glands. 4, 9 Lymphatic glands. 6 Zygomatic bone. 7 Maxilla superior. 8 Bridge of the nose. a. Musculus scutularis, the retaining muscle; (see No. 358 II) this covers partly the M. occipitalis and the M. temporalis, the temporal muscle. b, c, d, e, h smaller ear muscles. f. M. zygomaticus, (major) major zygomatic muscle which holds fast the corner of the mouth and the thyroid cartilage. g. face cutaneous muscle (cut off). i. M. masseter, a very powerful muscle which extends from the zygomatic arch to the lower edge of the lower mandible, and is, like the temporal muscle, the contractor of the lower mandible. It covers the bone with its entire surface, and only overlaps the front part of the M. molaris. k-s muscles of the mouth, the cheeks and the nose.

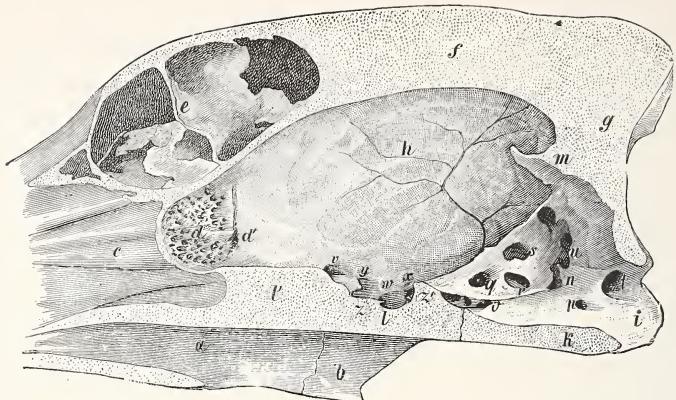


Fig. 337. V. Lengthways section of a dog's skull, side view. (Block from Ellenberger and Baum's Anatomie des Hundes, published by Parey, Berlin 1891).

a Os palatum, palatine bone. b Os pterygoideum, pterygoid bone. c Cellulae ethmoidales, ethmoid turbinate bone. dd/ Lamina cribrosa, and Foramen ethmoidale, parts of the ethmoid bone. e. Sinus frontalis, frontal cavity (with partly destroyed walls), which is filled with air. f. crista sagittalis, ridge of the crown of the head. g. Occiput, occipital, squama. h. Inner lining of the os parietale (parietal bone) with the broad deepening and ridge-like elevations for the sinuosities, and the ridges of the upper surface of the brain. i. inner surface of the Foramen magnum, occipital foramen. k. part of the occipital bone. l, l' part of the sphenoid bone. m Tentoreum osseum, osseous brain-cavity. n-y different openings in the skull, canals and cavities of the cranial cavity. z Sella turcica, pituitary fossa with z'. Dorsum sellae turcicae, back of the pituitary fossa.



Fig. 338. VI. Lengthways section through the skull of a 19 week old German shepherd dog (Heino v. Grafrath 1149, born 23/5/04, died 2/10/04). From a photograph by the Author.

See above, No. V. for the names of the various parts.

In comparing the 2 lengthways sections No. V and VI. it must be remembered that the skull in No. V. belongs to an old dog, which accounts for the specially pronounced development of the ridges of the cranium. The skull in No. VI. belongs to a dog which is not full-grown.

by numbers. Through this slight vaulting, — I refer here to what I said in the 1st. Chapter, and to the pictures there given of skulls and heads of shepherd dogs and wolves — the middle depression of the wolf's skull is partly or entirely eliminated, without producing a frontal declivity. The wolf-like low front with a depression in the middle is always to be judged adversely when the dog is examined, because it corresponds neither to the racial type, nor does it bear any relation to the duties to be discharged.

The judgment of the body build naturally cannot include the mental capacities: it must, however, see that those external forms are retained which allow of a sound and favourable development of those parts which form the seat of the mental activities. It can however, determine whether the breed supplies the external foundations for their existence. The development and the perfecting of the sensory and higher mental activities is then a matter of upbringing and keeping, as I already pointed out in my warnings against kennel-keeping and breeding in Chapters 3 and 4. Figure VI, the section of the skull of a young dog shows that a beginning can, and should, be made with the mental training of young dogs. A comparison of this skull with that of a Rude related to it, and double its age, which was also in my possession, shows that the brain pan of the young dog, which was about five months old, has nearly exactly the extension in length and breadth in its interior as that of the nine months old animal. In the face portion of the skull, on the other hand, the younger dog was a long way behind the older. The full quantity of the brain is already there in childhood, it only requires the development and the segmentation of the cortex of the brain by means of contact with impressions from the outer world, through the acquisition of experiences and the necessity of using the senses. This occurs through contact with the owner, through being brought out into the world, through instruction, and training, and through work, while keeping in a kennel causes the young dog to become dull and blunted.

We have seen that the firm, refined and ennobled head, with elongated but powerful jaw is suitable for the service dog, but indeed on the other hand, a too extreme refinement of the skull and elongation of the face must be avoided from considerations of serviceability. Exaggeration is bad in all circumstances. An overbred head and over-elongated jaw lack strength. A long leverage for a jaw bone ceases to be useful, it spoils, for it has become too weak for serious service. Dogs with such heads and jaws can cause terrible wounds, but they can no longer seize and hold fast, and they are unserviceable. It even sometimes happens that they can no longer chew hard food, but prefer only baby's food, and scraps chopped small.

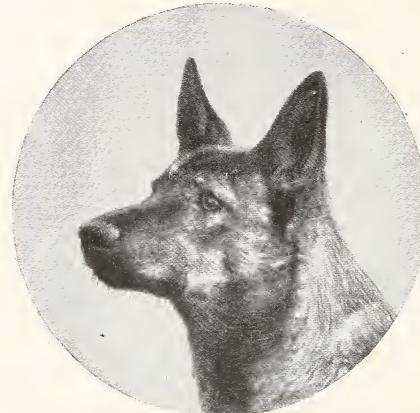
It is sometimes said by shepherds that long headed dogs can be dangerous to sheep. This, however, is not the case so long as the head and the jaw are well formed and in correct proportion to the rest of the dog, as a whole. On the contrary, such dogs are more certain in their grip, for the extension of the head compensates by its length

for what it loses in the thickness of the temporal muscle and the manducator. Super-dogs, however, which cannot remain with the sheep, are also unfit to be transferred to any other service, for they are absolutely stupid. They do not seize properly and hold, but indeed can cause damage by tearing. Such dogs with overbred heads must be considered as unsuitable from the point of view of service. Generally, not only dogs with long over-elongated and weak jaws are unsuitable for in service, but also animals with short, pointed, fox-like jaws, which are often seen in connection with short, bullet head formation, for they are lacking in certainly of aim and seizing power, and on the contrary can do serious harm.

I should like once more to give a brief summary of what I have already said about the head. The head, which should correspond in strength and size to the conditions of service, sex and the

race, when seen from above, should have wedge-like lines, and taper from behind forwards, so that the epicranium from the inion to the inner corner of the eye should be some what longer than that part of the jaw which extends from there to the end of the nasal bone. The after-breadth of the skull, which is a strongly developed occipital crest, and must afford a good muscular attachment for the temporal muscle, is toned down externally by a good high position of the ears, so that the back part of the epicranium appears to be only moderately wide. It must also, when viewed from the front, be almost flat, without

Fig. 339. Good, strong, dog's head. Siegfried von Jena Paradies, formerly Barbarossa SZ 1139 KrH PH SH, Field Trials Champion of 1906.



any vaulting in the middle. The front part of the forehead should be very slightly vaulted, so that when the head is in an horizontal position, this part is not lower than the region of the ears, and without, or very little depression in the middle. The ridge of the skull can be easily felt on the epicranium. The head should gradually slope away from the forehead between the eyes, without any sharp break, towards the ridge of the nose, which must neither be convex nor concave. The cheeks should be gradually continued into the jaw without any rounding protrusion, and the jaw should be drawn almost parallel from the region of the eyes to the beginning of the end of the nose, so that it retains sufficient width for strong incisors and fangs. When seen from the side, the epicranium, which must have a good depth, should first of all slope almost parallel with the lower jaw till, in the region of the eyes, it unites with the fang without a break. The fang also must preserve a good depth till it comes to the end of the nose.

A pointed, weak, and also too large a formation of the fang is faulty, because it diminishes the serviceability, or makes it very problematic in certain circumstances.

After the head has been examined as a whole with reference to profile and outline, the various parts must be reviewed separately. The lips must be tightly stretched, firm and fit well. They must form no chops, that is overhanging upper lips, which, because they do not close firmly, cause an overflow of the spittle and driveling. In the case of races with pendulous ears, a direct relation has been established between chops and the length of the ears. The formation of chops with a shepherd dog, which otherwise is only a defect in beauty, would be, and is still more, a nuisance in keeping, because the over-grown



Fig. 340. Head of a bitch, the limit of permissible muzzle elongation.

ear muscle, which has some connection with this, is a defect in service, for it prevents the erection of the shell of the ear.

I have already spoken of the formation of the jaw in dealing with the shape of the head generally. The bridge of the nose should run straight, and should not be like that of the wolf, saddle-shaped in front of the eyes, neither should it have the shape of a hooked nose.

The teeth must be thoroughly examined. In order that the shepherd dog may seize, and grip well, the incisors of the upper jaw must stand straight and fit, with their inner edge like scissors over those of the lower jaw. The wear and tear on the teeth is thus less than when the teeth grind one against the other, and the grip is more secure. The fang or corner teeth should be as straight as possible; those of the lower jaw somewhat in front of those in the upper jaw,

and slightly covered by them in the lower part. This position guarantees, according to Schäme, a secure hold, because the gripped part is caught between the corner tooth which is the last of the upper incisor teeth and the two fangs, thus forming naturally a trap like that of the wolf. Service dogs in Southern Germany, who have their fang teeth filed down to the height of their incisors, can only grip



Fig. 341. Audifax vom Sigestor SZ No. 7546 PH.

with these stumps and the incisors, their correct position therefore must be all the more a sine qua non for serviceability. The good forward breadth of the jaw, which makes the formation of good teeth possible, is secured by the wild dog-like formation of the intermaxillary which projects somewhat outward. The false molars also should stand in a correct relation to each other, and the laniary teeth in such

a way that the upper teeth, supported by the first molars should grip with the under teeth over and from outside, and thus form sharp flesh-cutting scissors.

Any deviation from this natural and only suitable position of the teeth in the jaw is to be judged as a defect for service; it decreases the security of the grip, and in certain circumstances, even renders it impossible. It injures the teeth by overexertion, when they snap together like pincers, and in the other case the teeth are spoiled by lack of use. According to the position of the incisors in relation to each other, one can speak of an "overlapping" or an "over-biting", or a "fore-grip" or "fore-bite". In the case of overlapping, as a result of a disproportionate elongation of the upper jaw which does not correspond with the lower jaw, a gap is formed between the upper and the lower incisors, which can be as large as $\frac{1}{2}$ ". One describes this as a "pig's snout"; and a grip with such a formation is obviously impossible. This, however, is still an infrequent occurrence with shepherd dogs. Overbreeding would tend to produce this, but it can also be the result of breeding between two animals which are strangers in blood strain, and unsuitable for each other. In the case of forebiting, on the other hand, the lower incisors come before the upper. I have, however, never observed this bulldog-like position of the teeth which leads to a receding jaw in the shepherd dog. So far as I can judge, it would entirely deprive him of the shepherd dog expression. The terms "over" and "fore-biting" are also used in another sense, viz., "overbiting" can mean not only a longer upper, but also a longer lower jaw formation, and vice versa the shorter formation of the lower jaw can be described as "under-biting", or "forebiting". The employment of a single fixed term for this, and for some other particulars would be most useful.

It is obvious, finally, that the teeth are to be examined as to their condition. I have already thoroughly discussed the matter of the so-called "distemper mouth", its origin and its actual seriousness under certain circumstances in the 4th. Chapter.

While discussing the head, we must also include the ears. High-set, well erect, upstanding ears are an ornament, and give the dog an intelligent wide-awake expression; floppy ears, set sideways, or standing on the head like horns give the dog a sleepy expression. In Spitzes, pendulous ears which more or less overhang are an insignificant beauty defect, which can be easily eliminated by breeding. Ears which are entirely pendulous, like those of the hunting dog, on the contrary, are something, which even if they were not an *actual* hindrance in service, exercise an unfavourable influence on the hearing of the dog. The ears must not be fleshy, and coarse; and their length must be in pro-



Fig. 342. Tilted ears.

portion to the head. The ear which lies forward, lying on the forehead should reach as far as the "four spots". Ears which are too long and bat-like are unlovely; they are mostly the result of over-breeding; and too small mouse-like ears give the head a strange Spitz-like expression. The interior of the ear shell should be strongest and well



Fig. 343. Large ears.

covered with hair on the edge of the under side, so as to prevent the ingress of wet, dust, and insects. If this hair is lacking, this is usually the result of a general refining process, and a shortening of the body covering through overbreeding. It also detracts from serviceability and can trouble the dog with severe ear diseases.

The dog, when on the watch, always pricks up his ears intently in the direction of the sound. When he is at rest, or moving, he usually lays them back. This is easily understood for the descendant of the beast of prey, who, when following through bushes and thorns, if he had his ears continually erect, would easily injure the shells of the ears. When about to attack, or to defend himself, the ears are laid right back; small, compact ears are occasionally laid forward, so that during the struggle no place for holding, especially in such a sensitive part, may be afforded to the adversary. If a dog does not wish to show his ears well while being judged, a call or a small movement of the judge must suffice to rouse his watchfulness. If he will not then erect his ears, he is either an incorrigible sleepy head, or as shy as a hare; and which of the two he happens to be, a further examination will reveal.

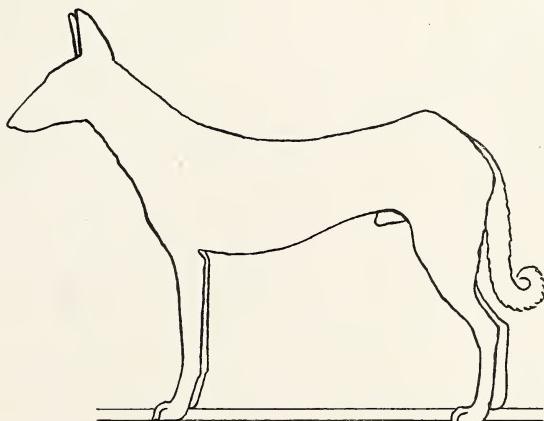


Fig. 344. I. A thin-boned misery, hooked nose, muzzle without depth, long thin neck, faulty withers, back too long, saddle back, overbuilt, sloping or falling away hocks, tail ringed at tip, faulty depth of breast, steep position of fore- and hind legs, shoulder and hindquarters without depth, totter hindquarters.

The almond-shaped, somewhat slanting eyes which are a little to the rear must not stand out as goggle eyes, but should be well covered by the eye-lids, as a protection for the eyes, if for no other reason. According to the racial hallmarks, they should, if possible, be dark, but this does not mean that the iris should be jet black or deep brown. It can also be a deep dark red to brownish yellow, as distinct from the glaring yellow which is occasionally found. *Generally the colour of the eye matches that of the coat: the darker the coat, the deeper colour in the iris.* Because we do not breed for colour, but cross back and black yellow dogs with those of wolf colour, light eyes are sometimes found with dark coloured dogs. The greater the difference in the colour, between the eye and its surrounding region, the more piercing and more vulture-like will be the expression, *which is a small defect in beauty*, but which can be improved by breeding.

Blindness is a most serious hindrance to service. A blind dog can indeed prolong his life, for his sense of smell, (which apart from that, is his chief sense), his hearing and his sense of touch will all be increased, but he is no longer serviceable. A partial but seldom total blindness can be the result of an accident, and, as such, there is no objection to it so far as breeding is concerned. This, however, is otherwise when it is the result of disease, and not also the consequence of old age. The most serious form of blindness, cataract, can be traced back to a paralysing disease of the optic nerve, and occurs very often in both eyes. Except for injuries to the skull, and inflammation of the interior of the eye, which are usually diseases of the brain, they are generally the results of distemper. Externally, there is no noticeable difference in the eye, because, the pupil is always wide open even in brilliant light. The eye even appears much larger and fuller, and this is known

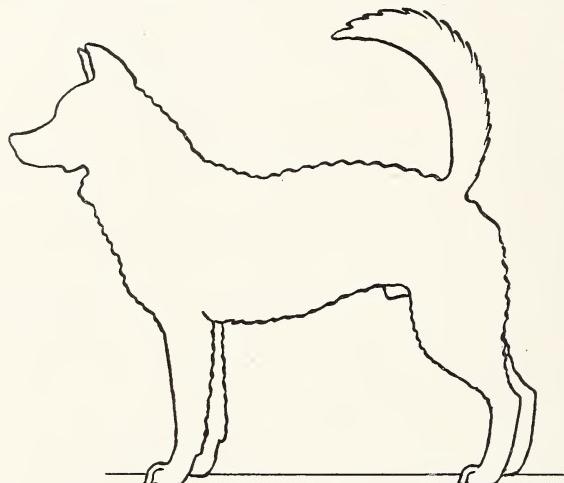


Fig. 345. II. Stumpy, coarse, short dog, short, full apple-shaped head, stumpy muzzle with chops, saddle-shaped nose, fish-shaped back, short hocks, tail set too high, and too steep, loose skin about the neck, short legs, steep but firm hind-quarters, curly hair.

as a "wall-eye". The owner cannot, however, fail to observe this, if he makes anything like an attempt at looking after his animal. It is generally impossible to state with certainty the cause of this disease, although it is usually the consequence of a serious attack of distemper which has injured the brain. Such dogs, obviously, must not be used for breeding; blind dogs therefore are barred from all Exhibitions.

I now come to deal with the body, and would first refer to a number of sketches which are included in this Chapter, for which I am indebted to the artist, Misset of Hanau on the Maine, who has depicted in them examples of good and faulty build and stand, and which will furnish the best illustrations of what I have to say.

The neck forms the connection between the head and the body. The shepherd dog has neither the long stretched-out neck of the Great

Dane and the Dobermann pincher, nor the short well set neck of the Spitz and the Boxer. The neck of the shepherd dog must ensure a free movement for the head in all directions and must be long enough to allow the dog to keep the track and to "wind" with his nose right on the ground at whatever pace he goes. It must, however, be strong enough to carry the head as a rule in a level position, and, above all, it must afford a good attachment for the powerful muscles of the neck which the shepherd dog inherited from his ancestral beasts of prey, which he also uses in his vocation with the flocks, and in other duties in order to give force to his grip. A neck which is too long and weak is a defect in the shepherd dog from the point of view of efficiency. During movement, the shepherd dog carries his head and neck generally fairly level and stretched out. When at rest, they are slightly raised. The neck is only raised higher in times of tense con-

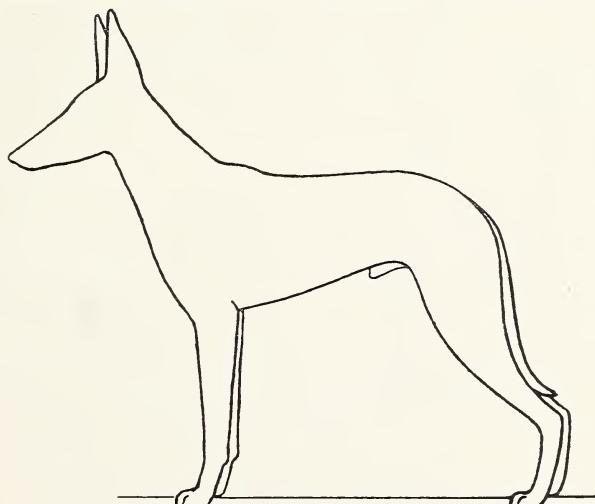
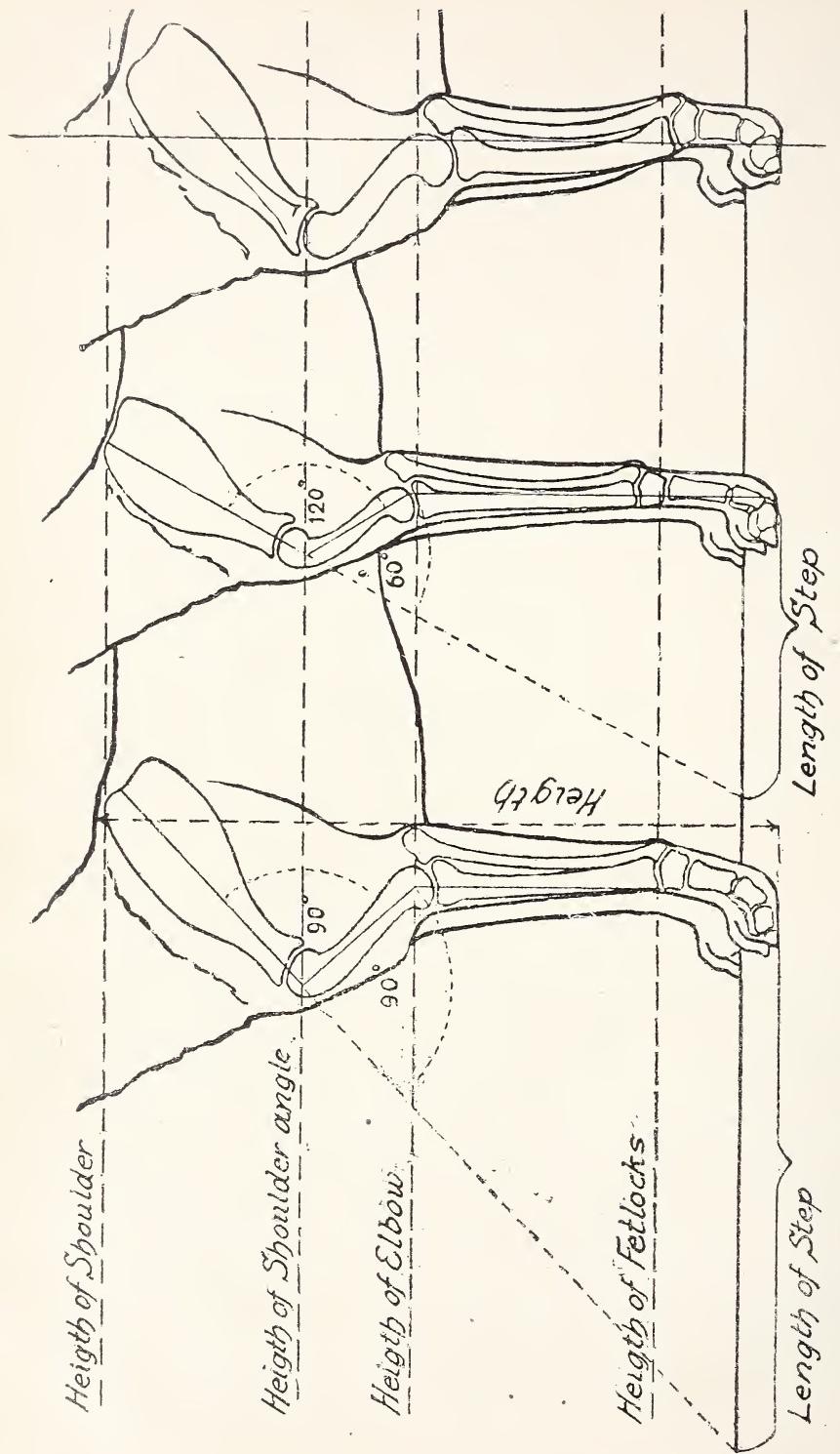


Fig. 346. III. The latest fashion in super-dogs; Dog with bitch-like exterior features, height out of proportion to length. Head too long with no depth. Over-developed weak muzzle, flat forehead, ears too long. Too long and too thin serpent-like neck, length of trunk too short, faulty prosternum, tucked-up body, steep position of the fore-quarters, hindlegs too sloping, with consequent weakness in hindquarters (false greyhound-build), hair too short.

centration, and also when lying down he looks up from his resting place. The hair, which is fairly short on the head with the exception of a tuft below the ear, becomes quite smooth on the neck. With Rude the region of the setting of the throat and the neck should be somewhat better covered with hair; and with old strong dogs, in the winter, at the same time, a slight ruff of hair is formed which stands up against the usual way of the hair. The skin must lie well down on the neck, and should never form a loose hanging superfluity or dewlaps.

The remaining parts of the body, the breast, the back and the limbs are parts which are used in movement, or have some distinct



- Fig. 347. Breast and Forelegs.
- 1 Good formation of prosternum and lower sternum, neck powerfully set, high long withers, strong bones and good leverage for the forelimbs, plenty of play for the shoulder, which makes a good long pace and advance possible.
 - 2 Faulty prosternum, depth of breast too narrow, thin neck, low withers, bones too long and too thin, faulty angles and accordingly faulty leverage for the limbs, little play for the shoulder, and consequently a short pace and advance, fetlocks long and too steep, stork-like build with poor gait, that appears to be good on account of the long bones.
 - 3 Compressed formation of breast and neck, large bones, shoulders somewhat advanced, bent radius and ulna with distended joints (the result of weakness in the bones) fetlocks oversteep and short, hind limb oversteep and weak.

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connection with it: they must accordingly be treated off as a whole. I must, however, beforehand deal with a few comparatively unimportant parts, and will speak of the hair, about whose varieties,

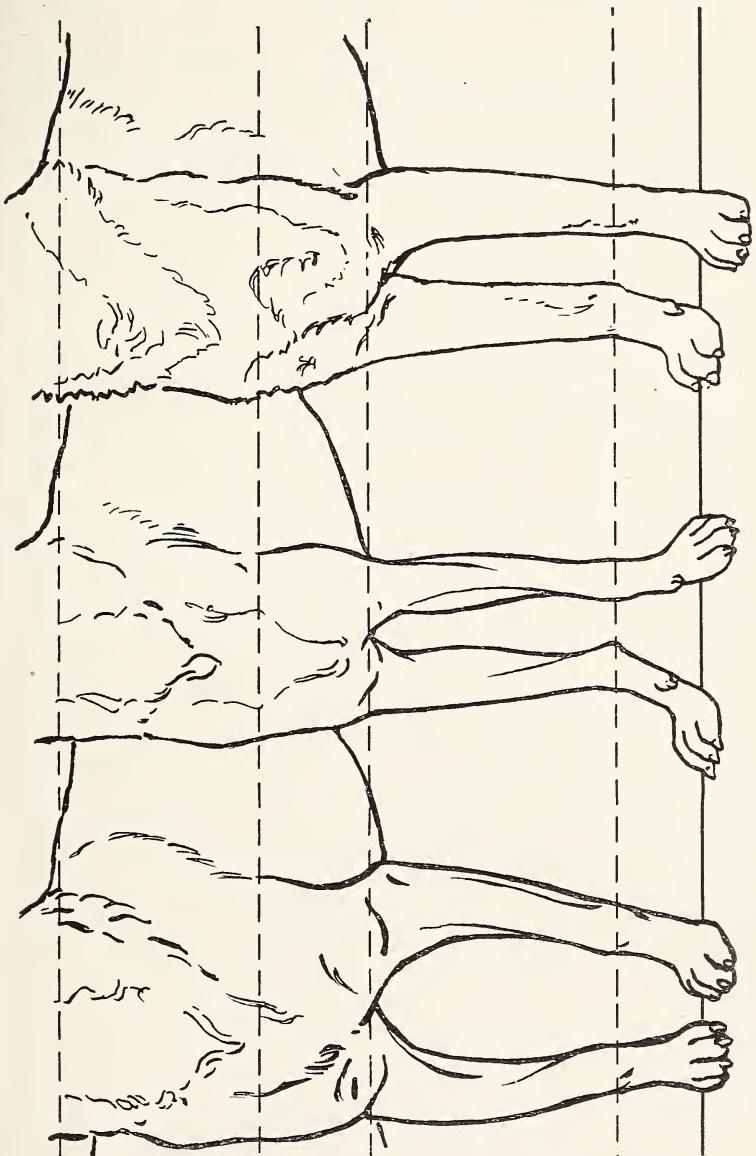


Fig. 348. IVa. Breast and fore-legs. 1 Broad barrel-shaped breast, distended or turned-out elbows, bent lower arm, knees too wide apart giving a bad stand on the ground and the toes. 2 small breast without depth, faulty pro-sternum, drawn out or loosely knit body, drawn in elbows, weak fetlocks, stand like that of a Frenchman or dancing master. 3 Good formation of breast and forelegs.

development and treatment I have already had something to say in Chapters I and 4. I have also mentioned the hair on the head and the throat, in the case of smooth haired dogs, about which I wish to treat first. From the neck a line of especially long and strong hair

goes over the back to the root of the tail. A single hair of the winter coat from the back measures from about $1\frac{5}{8}$ — $2\frac{3}{8}$ ", while the hair on the breast is especially thick though not so long. From the

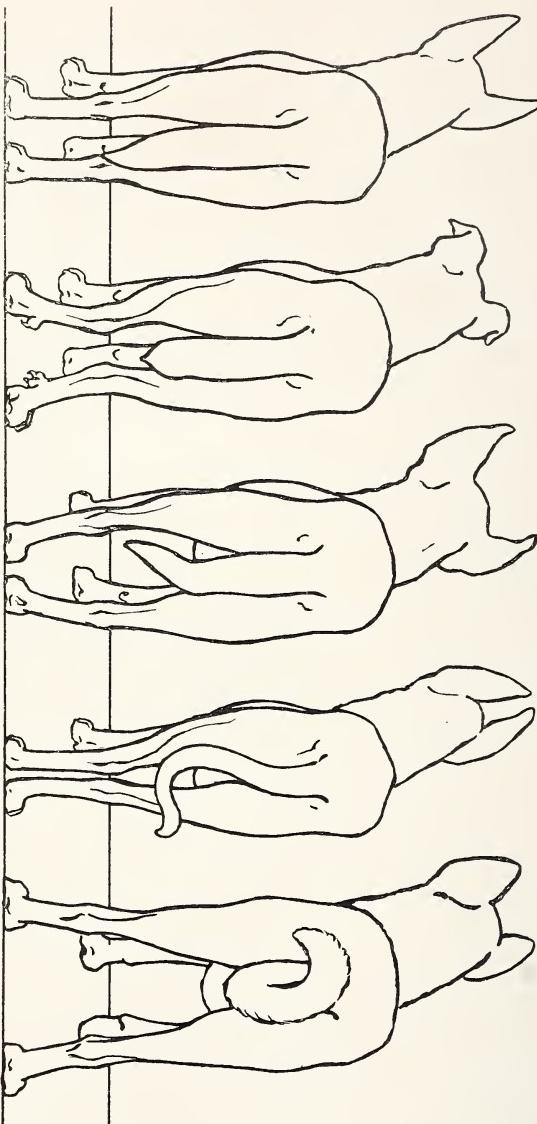


Fig. 349. V. Hindlegs, ears and tail (dog standing still). 1. Good stand and position. 2. Legs like riding breeches, knock-kneed, dew, or wolf's claws (left foot, single; right foot, double); double spurs, ears badly tipping over (too heavy), stumpy tail. 3. Bandy-legged, ears too large and too deep set, slight hook-tail, bending sideways. 4. Weak, sideways sloping buttocks like a pig, turned out knees, fox-like loins with bad position on the ground; ears too near together, too thin and too long, tail sideways bent. 5. Broad, coarse buttocks with broad steep stand, bear's feet, short thick ears, beginnings of a ring tail.

side, towards underneath, the length and the thickness of the hair decreases; only the haunches have longer and thicker hair as a protection. The hair on the lower sternum, except for the winter coat, is fairly short, while the back part of the belly, which lies between

the upper part of the thigh and the inner part of the upper thigh is covered with scarcely any, or only with very thin smooth hair without any underdown. The forequarters, the back part of the metatarsus, the paws and the toes have short but smooth hair; on the backside of the forelimbs somewhat longer hair is found, a light kind of plumage, but on the backside of the haunches there are "knickerbockers". The tail is well covered with bushy hair; it is not round in shape, but flat at the side. On the underside, the hair indeed is somewhat longer but without wisps. The formation of wisps occurs only with long hair. One can speak of it in the case of shaggy haired dogs. The wispy tail of short haired dogs is therefore nothing but a trick of the trade, If on the contrary, the end of the tail has an "S" shaped, swinging, always black tuft, this lack of it is a certain proof either of a naturally stumpy formation of the tail, or of artificial docking.

In the case of rough haired dogs which are becoming increasingly rare, the hair is generally shorter but harder. The short-haired parts with animals that have smooth hair have here rough hair; this forms on the jaw and over the eyes a more or less developed moustache and eye-brows. The tail is covered with short hair. Harsh hair should feel like wire to the touch. Generally, however, rough hair does not lie so thick and so close as smooth hair, and does not afford such a weather-proof covering as the hair inherited from the wild dog ancestors, especially as, at the same time, the underdown is not usually so well developed.

Shaggy hair finally has neither the hardness of rough hair, nor that of good smooth hair, but should feel rough to the touch. According to its length it lies in locks and strands and can also become very curly. Here the hair on the forehead falls on the side, partly covers the eyes, and forms a strong beard and moustache on the jaw. The paws also have long hair, and a well cared for tail has a wisp. Soft silky hair is a defect, and above all a rain channel on the back which is found with such a coat holds the water and drenches the skin, because with shaggy hair also the formation of the underdown is generally thinner than with smooth hair. I have already said in Chapter I that shaggy hair in wet weather will collect lumps of earth, when the dog is in the field, and frozen lumps of snow during the winter; on this account therefore, it would be a less suitable service coat, and is inferior to smooth hair as a protection against heat, cold and wet.

A weather-proof coat is a sine qua non for a service dog. The best covering is afforded by smooth hair of a suitable hardness and length, which also has good underdown, about which I have already spoken in full in Chapter 4. Smooth hair that is too short diminishes the serviceability of the coat, especially when it has been over-refined by breeding. The shepherd dog requires a field service tunic, and no dinner jacket. Hair that is too short can be the result of faulty keeping in a room; generally, however, like that which is too fine and soft, it is a result of mistaken breeding for beauty instead of for efficiency, and it is also a consequence of overbreeding. When judging the shepherd dog, attention must therefore be paid to the composition of the

hair, not omitting that in the interior of the ear, about which I have already spoken. A mixture in the hair sometimes appears as a phenomenon of "throw back" to the crossing of hair in the ancestors of the service dog. They must be judged simply from the point of view of serviceability, because otherwise they are not of much importance for the breed. Wavy hair often appears on the back and the flanks, which does not cover so closely and protect so efficiently as good smooth hair. Long smooth hair often appears without the underdown and is generally as unsuitable as shaggy hair. Good hair and a glossy coat are indications of a strong constitution and good health.

The colouring of the dog has no significance whatever for service; our shepherd dog accordingly is not bred for colour. Colouring therefore is only a fad of the amateur and as such is often liable to changes of whim. Although, it cannot be denied that a good pronounced colouring improves the general impression made by the dog, I am not in favour of a uniform colour; it does not suit our shepherd dog, whose coat requires some variation in colour, to avoid producing an impression of flatness. Pure black dogs can be tolerated because the light, as it plays on them, produces a change in the monotony; but they look as if they had been well licked, and that is most un-shepherd dog-like. "Black-Japan" offers no advantages as a body covering, in my humble opinion. White-yellowish, cream-coloured, dun coloured, or pure white smooth hair look terribly dull and uninteresting; the shepherd dog soul of the unfortunate possessors appears to be as pale and as overbred as their coat. The old-gold-red coloured dogs which produce a better impression already show the usually lighter points, and are a transition towards wolf-colour. The so-called silver-greys are only a bleached and watered down edition of these; the more cloudiness they show, the stronger and more shepherd dog like is the impression made by them. Dapples and piebalds always produce a somewhat unrepouseful effect. Their uneven colouring disturbs the weep of the shepherd dog lines. If the blue or red dapples are small they produce a particularly distracting effect. They can only be tolerated in shaggy hair at the most, but a smooth haired dapple, is hideous.

Tiger marked or striped dogs, and those with black stripes, or bands on a lighter ground do not make a good impression; they are often only striped in the legs, though sometimes also in the head; but this especially ruins the picture. The pure wolf-coloured dogs, or the black dogs with yellow points create by far the best impression, as compared with those who differ by having a yellow coat with black saddle; all the more so as the smaller the saddle, the more lemonade-like is the colour. I have already said all that I have to say about colours, their composition, and their importance, or rather unimportance as regards serviceability, in Chapter I; and I only touch upon the matter here once more because so many mistakes are so often made in giving details of the colours for the Stud Book. The colours, of which more has been said in Chapter I, must be instead, as here described viz. black without points, red-dapple, silver-piebald on a black ground, brown tiger, or else striped points along with the

colour given, and finally, black with red-brown points, for instance, and a tawny colour with black saddle. Along with the wolf-coloured variety, there is a black, more or less dark and strong shade; a cloudiness on a from light to dark grey ground, grey yellow, yellow red, yellow brownish or red brownish ground. Such dogs are described as "grey flecked", "greyish", "yellow-flecked" etc., — "wolf colour" is not a sufficiently accurate description, — to which must be added the ordinary colours of the points in a description of colours, as for instance, from red brown or tawny colour to light yellow, even as the irregular points must also be given. With these wolf-coloured dogs there is found the darker body colour, as Beckmann calls it, and it is most strongly developed on the back, the prosternum, and the haunches, and fades gradually into a lighter marrow-like colour which is always found on the underside, and regular points. As a rule, a darker stripe runs from the under part of the ears and from the withers on both sides towards the throat and the shoulders, and both are plainly brought out into relief by a stripe of lighter hair. The tail on the upper side, matches the colour of the back; it is mostly black or a dark colour; the tip of the tail is always black. A small black triangle is found with the point turned towards the end of the tail is found on the upper side of the wild dog's tail in the region of the sexual parts, when the tail is carried down. In the case of older dogs, this generally disappears in the darker colouring of the upper part of the tail, but it, can however, be distinguished plainly in pups which have not yet received their permanent colour, and with tails of young dogs which have not yet become bushy. In the case of black-yellow dogs, the regular points, which are soon to be mentioned, bring enough life into the picture, for they produce as fine an effect as wolf-colour.

When considering the points, we must distinguish between those that are regular and irregular. Those that are regular are generally redbrown, tawny to light yellow in colour, and sometimes wavy striped. The points are the four flecks over the eyes; further they are more or less found on the muzzle, on the cheeks, sometimes on the epicranius, on the legs, and generally also on the prosternum, the tail is black, as already said, and always very light in the sexual parts. We can also mention as further points the mask, a deep dark to black colouring of the otherwise lighter coloured face part. There is also found a reversal of this colour, a black streak on the back which, with lighter coloured dogs, is a long dark streak which runs along the back, and finally the marks on the toes which are black spots on the upper part of the toes above the toe-nails. The irregular points which are generally white and of different size are found, when they occur, (which is but seldom), on the breast and legs, beginning sometimes on the toes, and sometimes, as stockings, reaching as far as the first joint; they may also appear on other parts of the body. Regular, as well as irregular points must be registered as included under colour; hence it must be realised that the small white markings which are easily seen on pups, often grow in such a way later on that they are

scarcely or not at all recognisable. This is especially true of the little white star on the breast.

Something has already been said in Chapter 4 about the tail and how it ought to be carried. A turning in of the tail to form a ring is a fault from the point of view of efficiency, because the tail serves as a rudder for the dog when moving and especially in sharp turning. A bad carriage of the tail, especially a ringed tail interferes as a rule with the general impression, because it disturbs the even flow and noble sweep of the shepherd dog lines. The tail must not be set too high, which can easily happen when the buttocks are too flat. It is then carried too steeply even abruptly and laid over the back. The tail must not be short, thick, and round like a sausage. A stumpy tail always looks unlovely, but it must neither be long and thin and eel-like, which is often the case when the hair falls out as a result of overbreeding. A strong dog must have a strong tail, as a finishing



Fig. 350. VI. Carriage of tail (see also previous plate). 1 good carriage of the tail, at rest, during exercise, during excitement. 2 Hooked tail. 3 Tail rolled at the end. 4 Ring tail.

off to his body, that is, a tail which by means of its perfected muscles can move in all directions. Tails which reach down to the ankle joint are the correct length, and are therefore generally well carried. With tails which reach down further — the number of bones in the tail varies between 20 and 21, though a deeper set of the tail can also be the reason for this — the end of the tail hinders the dog when running, because it continually beats on the heels. The dog then helps himself by forming the troublesome end into a slight hook, which has a sideways or an upward bend. This is a hook tail, or when it rolls the end only, a tail with a rolled end. A slight sideways bend, from about the second third of the tail is often found in shepherd dogs, even in those who do not have too long a tail, and was formerly regarded as a racial peculiarity. I have often seen this in dogs who were not of German breed. The artificial carriage of the tail produced by sharpers cannot always be recognised. The fine cuts, by which the muscles of too many a tail have been partly cut through and thereby weakened, are, later on, no longer visible under

the thick hair of the living dog. Jointings of the tail can be felt as healed fractures, when carefully gone over and touched. Fractures of the tail can easily occur with pups and young dogs at play. If two places of fractures are close, one behind the other, there is always a suspicion that this is due to an intentional fracture. Tails which even in motion and excitement are not carried high, but hang down, incapable of motion, close to the root, or from the upper third, are called "lambs' tails", and are nearly always due to intentional crippling. When there is ground for such a suspicion, the manner of the carrying of the tail of the dog concerned is to be carefully examined when he is trotting. A short inspection must be devoted to the tail during the trial run, because any defect in the tail often only shows itself first at that time. I have already spoken of the signs by which a docked tail can be recognised, when dealing with the hair and the colour. In every case, where there is any suspicion that unfair means have been employed for the improvement of the carriage of the tail, a veterinary surgeon should be consulted if possible.

Dogs who were born with stumpy tails, or those whose tails have been made so, should be barred from breeding. Lately among the descendants of a very inbred, and unfortunately much sought-after dog, many dogs can be found whose tails lack nearly the lower third, and which look as if they had been hacked off. These dogs were generally born so, and in some cases the gangrenous tip of the tail fell off when the pups were still in the nest. Because this malformation has occurred already in the second and even in the third generation, and was indeed inherited from dogs who did not have this themselves, it must be removed as far as possible, because it spoils the breed.

Finally, the sexual parts are not to be considered when judging. At the same time, when giving his opinion at Shows, the judge should satisfy himself that dogs possess externally the usual proofs of their capability of breeding, and that they are neither castrated, nor have one or both testicles in the hemal cavity as a faulty development.

I come once more to the body, and will begin with the breast. This provides room for the heart and lungs, and the forelimbs are connected with it. Its good formation therefore is of special importance for efficiency. A good breast must be deep, long and proportionately wide, not too broad nor too small. The depth of breast (see c—e in Fig. 329) should measure nearly as much as the distance of the sternum from the ground (see e—d in Fig. 329). The depth of the breast can only be taken with the afore-described small animal measure, whose two arms are pushed up into the proper place, previously ascertained, close to the withers and the lower sternum. It is good when the lower sternum, with its lower edge intersects with the ulna or reaches up under it. The full development in depth is attained on the completion of the general development of the dog, when he is about two years old. The foundations for a good depth are laid in breeding, but in all circumstances it is left to upbringing to develop and encourage by means of opportunities for frequent

and violent exercise. Dogs who were compelled to pine away their youth by continual confinement in a kennel or a room will always exhibit defects in chest development. The long sternum and the degree of the curvature of the ribs backwards have a direct bearing on the length of the breast. The long sternum affords good attach-



Fig. 351. High-limbed, short, steep stand, drawn-in belly, no breast.

ments for the breast muscles, which play a part in the movement of the forelimbs.

The breadth of the breast depends on the curvature of the ribs. This must be good, but not barrel-shaped, because that would hinder the expansion when breathing. If a particular width of breast is

necessary in order to form a sufficiently roomy thoracic capacity, a slight overstretching beyond the proportional breadth will be a bar to quick, certain, and enduring forward motion, through an overstraining of the forelimbs. In the case of old, often used, or little worked and therefore stiff muscled dogs, or with young dogs who have been used for breeding too soon before they were completely developed, this also takes place through a gradual falling away of the shoulder and ulnar ligaments, which produces too wide a breast like that of a stallion, with ulnas that bend outwards. A breast that is too small does not afford enough room for the lungs and makes it difficult for the dog to preserve his equilibrium, and in order to compensate for this disadvantage, the ulnas are drawn in and the legs drawn out to the "French position". The circumference of the breast is greatest just behind the ulnas, while the breast most naturally slopes forward in the form of a wedge, so as not to hinder the bringing forward of the "upperarm" in a straight direction. The circumference of the breast is measured in the above-mentioned place, and it must be done with a tape measure drawn tight over the skin, as a vain woman measures her waist, and not loose over the hair.

The body should gradually decrease in depth from the lower sternum, over the belly towards the groin. The belly therefore should not fall away too abruptly to the thorax like a greyhound. The groin also should not be drawn in, but on the other hand, the dog must not appear too filled out in this region. A strong body that is not too flat in the hind parts must have enough room for the development of the stomach and intestines, which is a characteristic of good digestive organs. This is not the case with animals that are too long drawn out; if they are bitches, they are not of much use for breeding, just as ladies with "wasp waists" are bad mothers.

The spinal column, which extends from the head, by way of the neck to the end of the tail lies in the upper part of the body; this in conjunction with the ribs which are joined to it, and the fore- and hindlimbs, forms a bridge-like skeleton for the body, which, by means of the muscles, which hold together, bind, support, stay and carry it, serves then for the forward motion of the animal. This upper part of the body is generally called the back; it is divided into the withers, the back proper, and the loins which end in the buttocks.

The withers which are the fore part of the back serve as a passage to the neck; they are composed of the spinal process of the first dorsal vertebrae, of which the upper ends, in the case of dogs, run in an almost even line and do not undulate as with horses. The withers externally do not come so strongly into evidence. Because the back and the shoulder muscles are attached to the spinal process, this produces high and long withers which favour a long step and endurance, and are therefore necessary for service. Finally, a good powerful development in the height of the spinal process, in conjunction with good breast formation, renders possible a broad and oblique position of the shoulders, which again is essential for the suitable position of the forelimbs.

The back itself succeeds the withers, which stand in closest relation with the loins which are carried by the lumba and extend as far as the buttocks. The region of the loins is often falsely called the "kidney region". The kidneys indeed do lie under the first two vertebrae of the lumba, but only under these, and generally have nothing to do with the lumbar portion of the vertebrae and its functions. The breadth of the back tapers off somewhat in the region of the loins, because the lumba carries no ribs. This very important part indeed must be especially strong and well knit for the transference of the "follow through" of the hindquarters. The side



Fig. 352. Curved spine (saddle-back).

processes of the lumba are covered on the upper side and in the abdominal cavity with strong muscles which serve in motion. A good breadth in the region of the loins is therefore necessary for efficiency. The back should be straight and powerful. A vaulting already formed and strongest in the region of the loins, and extending upwards is called a "high" or "fish back". The strength of the muscles is not turned to such good account here, as in a straight back. Sometimes the dog gives the false impression of having a fish back when troubled with tape worms, or with stubborn constipation, for he is accordingly compelled to step short. But a short run on the leash soon tells its

own tale. If the high back is less favourable from the judge's point of view, than one which is straight, it is at any rate better than one which is bent in, or a curved spine, which nearly always occurs in combination with a bad formation of the withers and the length of the back. Curvature of the spine diminishes the power of endurance, and speed, and is therefore an especially serious handicap for efficiency, which is very often seen in bitches who were too early and too frequently used for breeding. About the end of the period of pregnancy, even the strongest backs give a little. In the case of young dogs, curvature can be the result of overloading the stomach with large quantities of food, and of working on a full stomach. The buttocks or the crupper succeed the loins, whose long foundation is formed by the sacrum and the ilium; but I can speak of these more conveniently in conjunction with the hind limbs.

I compared, above, the back, which forms the connection between the parts which support the fore- and the hindlimbs, to a bridge, over which forward movements are conveyed from behind. It is obvious that the back can all the better discharge its double function of connecting and carrying, and its work as the medium by which the movements are transferred, in proportion as the muscles are thicker and stronger, and also in proportion to the shortness of its length. Yet one hears sometimes that the shepherd dog ought to have a long back. It is nothing but carelessness of speech — or laziness in thinking, which is about the same thing — which speaks of length of back instead of length of body. The good length of body which belongs to that stretched out build, which corresponds to the racial type must not be due so much to a very long and therefore somewhat weak back, as to the good depth of the fore- and hindquarters. As we shall see later, the back must transfer the forward motion of the hindquarters and the "follow through" to the forequarters. The longer this is, the greater will be the exertions of the muscles of the hindquarters and of the back itself, and the less will be the endurance. On the other hand, a back which is too short is no advantage; and indeed the shepherd dog does not require such, because he is no weight carrier. A short back makes the motion hard and uneven; and can lead to injury of the forelimbs through the nails of the hind feet; and diminishes that capability to turn which is so necessary for a shepherd dog. A short back is also nearly always seen along with that undesirable steep position of a hampered high gait; which again upsets the equilibrium, because it demands a different distribution of the weight than that which is natural. A short back therefore is just as much a handicap to efficiency as one that is too long and weak. On the contrary, a moderately long, level, strong, and accordingly suitable back for the gait which is possessed by our dogs, gives that gait which is easy, springy, apparently so effortless, and yet so effectual, through a well-set, harmonious and progressive advance, which is the delight of all observers. The gait of a good shepherd dog is so easy and gliding that during an even trot, not a drop of water would be spilled from a full glass placed on his back.

I have already spoken of the consequences of an un-shepherd dog-like shortness, and have also proved the close relation between the total length and the height, which is favourable for endurance and length of step, which, as we saw, is suitable to the racial-type of the shepherd dog. I also said, further, that the good length of the body which is so absolutely important for the shepherd dog should be the result not so much of a comparatively long back, as from long withers, and the depth of the fore and hindquarters. These parts must, when seen from the side, be broad and deep; which is secured by the good position of every single one of the leg bones. I wish to draw attention to the skeleton (Fig. 328) and the typical dog (Fig. 329), and also to the drawings of the positions of the limbs (Figs. 353, 354) which all belong to what is now about to be said; and if all is not clear, to return to this when I have fully explained all that is important about the limbs themselves. Here let it be said once for all, the more favourably placed the fore and the hindquarters, and the stronger they are, the greater is their share in the total length of the body. Longer and higher withers not only contribute to increase the total length, they also facilitate a good position of the shoulders, and afford good points of attachment for the strong muscles, they also promote a good length of stroke and step. So we see that all the points on which quick and enduring movement depend, well placed forelimbs, long withers, a suitably long but strong back, and again suitably formed hindquarters contribute to give the shepherd dog the desired stretched out appearance. We see further, that a dog which is too short can have a certain speed, but never endurance and power to stand firm; that he is no service dog, and therefore no shepherd dog.

I now come to the different supports of the skeleton, to the limbs which make it possible for the body to change its position. The forward movement of the dog, as with all quadrupeds, takes place through the fore and the hind limbs with the assistance of the back. The hind limbs have to perform the chief work, which is the propelling of the load; the back has to transfer this forward movement, while the forelimbs have the special duty of going forward and supporting the body as it is propelled onward.

The dog, as shown in the 1st. Chapter, has developed in the course of evolution from the original sole-walkers, that is from animals who stepped with the entire palm of the hand or the sole of the foot to become toe-walkers. It would be beyond the scope of this book to examine why and how this happened, and for what reason a toe has been lost, and what advantage has been secured by this. The dog then only treads on his toes (fingers), while hand and foot have established themselves to become metacarpus and metatarsus, and with wrist and heel have become fore-foot joint, and hock of the limb as it continues upward. The metacarpus and the metatarsus have only become a very little extended in the case of the dog, and are, therefore, of very little importance to the other parts to be found there. The bridge which is formed of bones, cartilage and joints, held together and moved by muscles and sinews is wonder-

fully adapted by the position of the various parts in relation to each other. As the result of the cooperating leverage, it imparts to the body that possibility of swift forward motion which is suitable for the circumstances of its activity; also, through yielding and springing, it absorbs the shock which occurs every time the feet are set to the ground, and distributes it over the various parts of the legs which receive it so that the animal can sustain the continuous succession of recoils. The more favourably the various parts of the legs are developed in relation to each other, and in relation to the length of the body, the more progressive and smooth will be the forward motion of the animal; and all the later will be the time of fatigue, and of wear and tear, and the greater will be the powers of its endurance.

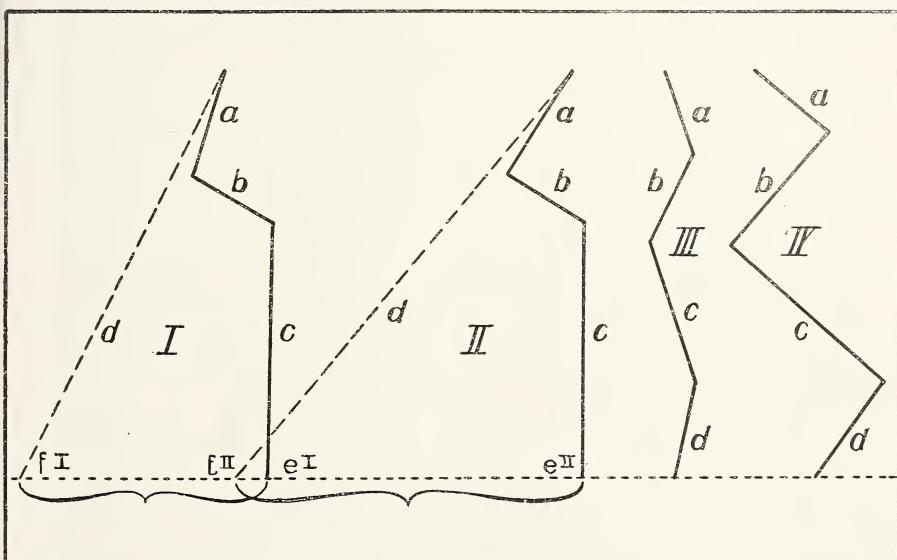


Fig. 353. VII Examples of steep-set (I and III) and well-set (II and IV) fore- and hindlegs eI-fI length of step in a dog who is steep-set in the forelegs. eII-fII length of step in a dog with well-set forelegs.

If the various limbs were, as children love to show, made out of one single piece, they would be as four stilts projecting without break from their place in the body, and the only possible movement would be a very short step. The harsh unbroken transference of the shock when treading would put such an animal out of the running within a very short time, and would cause him to succumb in the struggle for survival. Of such serious errors against the fundamental laws of the Science of Motion, creative Nature has made herself as little guilty as in other instances, by the foundation and the further development of the quadruped body, and by the method of motion.

We speak quite correctly of a mechanism even in the body of an animal, because regular laws of the Science of Motion form the

basis of the build and the use of the limbs everywhere. In connection with these Laws of Motion, a regular Science of Animal Observation and Judgment has been evolved and perfected by animal breeders and specialists as the result of their knowledge and experience; in which connection let us call to mind the fundamental principles formulated by Settegast.

I have already maintained, in speaking of the muscles that long muscles, and consequently good leverage, are absolutely indispensable for our dog as a running animal. I have also said that long bones are a sine qua non for the formation of such muscles. Let us now glance at the sketches of the forelimbs and hindlimbs in Figs. 347, 353, 354. First of all, if we look at Fig. 353 we shall see

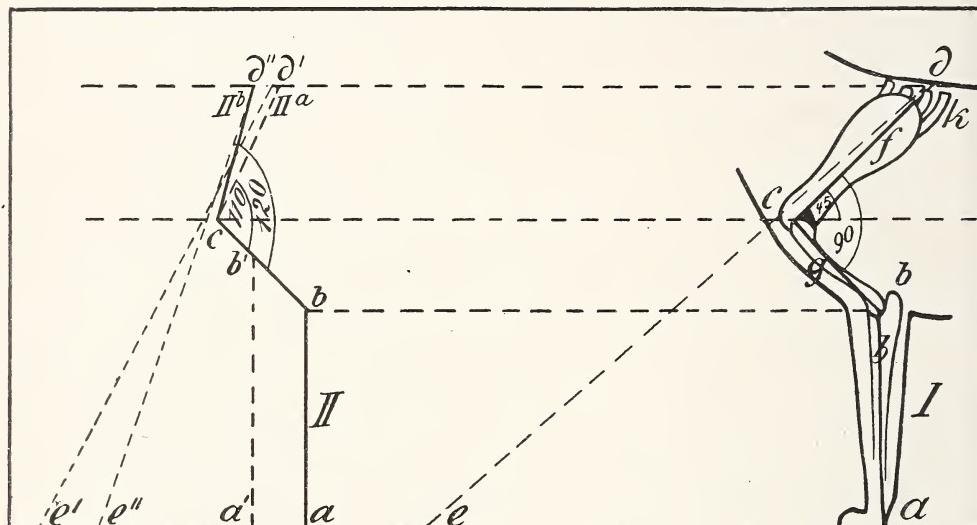


Fig. 354. VIII. Examples of a well- and unsuitably steep-set foreleg. I Good jointing and setting of the bones forming the forelegs. h ulna, b elbow joint. g humerus. c shoulder joint. f shoulder blade. k spinal process of the cervical (withers). a-e length of step. II steep set of shoulders and their consequences.

that the length of the various bones of the limbs grows, the more they are inclined to each other, and the acuter the angle formed by both joints. Above as well as below, the size of this angle is fixed by the total proportion of the body, although there is a sufficient amount of variation allowed within the limits set down. The most favourable setting of the shoulder blade and the humerus in the forelimbs, and of the ilium and the femur in the hindquarters is that which, in the angle formed by the bones mentioned, approximates as nearly as possible a right angle or 90 degrees. They form this right angle in such a way that these said bones are at an angle of 45 degrees to a line parallel with the shoulder, hip joint or knee joint, so that the angle of the joint is divided by this line into two equal parts.

In this connection let us deal with the drawings of a good and of unsuitable acute angled forelimbs in Figs. 347 and 354. In both, in No. 1, is shown the just mentioned favourable bearing; the angle of the shoulder is 90 degrees, and the shoulder blade and the humerus form with the line parallel to the shoulder joint an angle of 45 degrees. The shoulder blade moves itself on a transverse axis, which is situated somewhere over its centre. By this means the under and longer part of the shoulder blade lifts itself with the forelimbs as they step out. We see from the picture that the longer the shoulder blade and the humerus, the more slanting is the position of both, and the greater the power of motion and the forward shoulder play possessed by the limbs. We know, further, that the longer the shoulder blade, the longer also will be the muscles which cover it; and the greater the leverage and the efficiency. This position also guarantees a great length of stride with increased endurance and efficiency; and this too for other reasons as well as because a greater length of the single steps economises in the number of steps taken by the dog over a certain distance.

On the contrary, in No. 2 Fig 347, and No. II in Fig. 354, we have a very steep setting of the shoulder and the formation of an angle which is far in excess of what it ought to be. A first glance at Fig. 354, No. II shows that the formation as given in IIa and IIb are an impossibility in body build. The withers would in that case lie in front of the forelegs, and would swing in the air; the shoulder would be pushed forward in such a way that the dog would actually be unable to run owing to the position of the centre of gravity, but could be safely guaranteed to possess the power of continually dancing on his nose. The unfavourable position of the shoulder and an obtuse angle of 100—110 degrees or more must indeed be secured in another way. The forearm must either be so shortened that a natural formation is possible, as shown through a'—b'—c'—d' or, as shown in d". Let us think here of the bones and the contours of the sketch in No. I; there we have a pigeon-breasted, stork-like dog in front of us, the depth of whose breast would not approximate, as it ought, the distance of the sternum from the ground, but would be about one third of this in measurement. The play of the shoulder of a dog so deformed would be only equal to the distance a'—e', or a'—e"; and would be so confined, that it would only be half as great as that in the most favourable position in I (a—e), or else the humerus (g) must be in a steeper position. I have not gone into this contingency, chiefly because it would have made the drawing more complicated, and also because it is easily seen in Fig. 347 No. 2. The shoulder joint (c) in this case would come to lie somewhere about where, in II, the middle of the three parallel lines cuts the "1" in the "120". In this way at least a somewhat more inclined position of the shoulder blade would be obtained; and the play of the shoulder would be a little improved. But as we have already seen in position II, in both cases, the length of the bones in question, (of the shoulder blade as well as the humerus), would be shorter than those in the desirable good formation as seen in No. I, and this shortening of the bone is the result of the shortening

of the muscles and the decrease of the leverage. *Thus, every increase of the angle of the shoulder beyond 90 degrees produces a diminishing freedom of play for the shoulder, and, along with this, a decrease in efficiency and endurance, which is not confined to these parts.*

The same is true for the hip joint and the femur as for the shoulder angle (see the sketches Nos. VII, III, IV). It should be as little obtuse as possible, and should approximate as near as may be to a right angle, so as to ensure a good follow through, turning power, and endurance to the hindquarters. So far as the angle of the knee is concerned, the most favourable position, as in No. IV, is not attained, because this involves a length of femur and shank bone which is not natural to the shepherd dog, and which in this case, would have a necessarily awkward position, and other disadvantages as the result. If the angle of the knee, in an otherwise suitable formation of the hindquarters does not exceed 100 degrees, it can be passed as good.

Whoever wishes to understand these explanations more clearly will imagine the fore and hind legs corresponding to shortened tooth picks or matches, and will attempt movements with them on the surface of a table. The experiment will furnish an overwhelming justification for these principles of formation already advanced.

Thus indeed it might be concluded after what I have several times emphasised about the advantages of long leg bones, that a large high legged dog, thanks to his long legs, will beat a smaller dog by the length of his stride. This, however, is not the case, the high legged dog always has his legs placed steep, and the length of his stride therefore is always considerably shorter than that of a good-angled middle sized and even smaller dog, which can easily be understood by a comparison in the length of stride in Fig. IV Nos. 1 and 2; besides, as a consequence of the steep position, the high legged dog lacks the springy absorption of the shock, and accordingly he uses up his joints and ligaments more quickly. It is only the well-proportioned good-angled large dog which will surpass the smaller animal in the length of his stride; but even here the weight of the bones impairs the endurance and diminishes the speed of the gait. This is also obvious again from the fact that the medium sized dog, as we would breed him, is undoubtedly to be preferred in service to the large dog, because the latter is less efficient, and this is true too in the case of the smaller dog.

After this glance at the dog's moving mechanism as a whole, and after considering the interrelation of the various parts, let us turn first to the forelimbs which, as such, form a part of the fore-quarters or front part, but are not this part itself, as an examination of Fig. 329 proves.

The forelimbs should catch up and supplement the transferred forward movements of the hindlimbs, and the weight of the body thrust forward by them. During a gallop it is only a question of the duty of supporting and absorbing the shocks encountered in the stride, while in the trot, which last is the most important gait for the shepherd dog,

the roominess of the forward motion depends on a good formation of the forelimbs. The stepping forward of the forelimbs, that is the space taken up in changing the step, and then in again supporting the body as it is thrust forward depends especially on the freedom of play in the shoulder, that is on the movement forward of the shoulder blade, and the humerus which is possible for the forelimbs. In order to absorb the shock of the weight of the body which is taken up, and to prevent themselves being worn out, the forelimbs must further be well placed in their joints, and in correct angles to each other. The forelimbs should stand straight under the body, and should be seen so, when viewed from the front and the side; they should stand neither too far from, nor too close to each other.

The forequarters are composed of the shoulder blade, upper arm, forearm, metacarpus or fetlock, and the forepaw; its skeleton is formed by the shoulder blade, humerus, radius with the ulna, the bones of the metacarpus and the toes (phalanges). Between the shoulder blade and the humerus, there is the shoulder joint; the small conjunction of bones in the paws is a minor detail for us.

The shoulder blade forms a close connection between the leg and the body, and this is joined to the nape of the neck, the throat, and the back bone, and the four front ribs by muscles and ligaments. Some very strong muscles are bound to the shoulder blade which move it and the humerus; a ridge which extends from the outer side of the shoulder blade from the top to the bottom called the scapular spine, increases the firmness of the attachment. The shoulder blade must be long, its upper back edge should lie over the ulna, and finally should lie transversely over the ribs, and as far as possible form an angle of 45 degrees with the horizontal plane. The shoulder blade together with the humerus forms the shoulder. The humerus must also be long and in such a position that it forms a right angle with the shoulder. It is called "protruded", when it reaches too near the point of the sternum, and "sunken" when the shoulder is at too great a distance from it; both positions exercise an unfavourable influence on the play of the shoulders. The same is true of the "bound" shoulder. This is a result of a steep position of the shoulder blade and the brachium; and of one which forms an obtuse angle with the shoulder; or of a muscle which does not extend far enough through lack of use. All animals brought up in a kennel, or kept as stay-at-homes without adequate exercise always have a smaller play of the shoulders, and the consequent shortness of stride which can be traced back to "bound" shoulders, than is warranted by the natural formation of their bones. In the case of old used-up animals, muscular wear and tear equally hinder the play of the shoulders and the forward gait.

A shoulder which can be described as loose or ricketty causes a great deal of mischief. The expression "loose" is taken from the vocabulary used in horse judging and it means there a shoulder which moves up and down on the thorax when the corresponding limb is working. In the case of horses this loose shoulder is especially a fault in colts, which is due to an insufficient tautness of the muscles which bind

the shoulder to the body. When these muscles become firm, the shoulder is held secure as it ought to be. With dogs, a loose shoulder in this sense is found very seldom; where it occurs it would be a very considerable defect in efficiency. While examination is being made, and the dog is held, it is not possible to prove it by simply pressing on the forequarters, but only by testing of the gait of the dog. Muscular weakness and flabbiness are found in such a dog not only the muscles connected with the shoulder, but the animal is weak in all his ligaments, and they give when any pressure is brought to bear on them, e. g. when the legs are placed on the ground, and they turn out the ulna as a consequence. This fault, however, has absolutely nothing to do with the loose shoulder, although it is erroneously attributed to it; whoever has a thorough understanding of the skeleton and the body build of a dog will avoid this mistake.

The turning out of the ulna is also a serious defect for service, because it can be traced back to weakness of the ligaments, and decreases both the power of endurance and the length of the stride. The ulna should form a firm connection between the upper arm and the forearm which does not give outwards when any pressure is put on the legs, to form extended or distended ulnas. This distension is seen especially when judging the gait of the dog; which in serious cases can already be observed when the animal is standing. If the judge presses with the open hand on the withers, a steady strong muscled dog should be able to bear this pressure without any part of the forequarters exhibiting any signs of giving; if the dog is weak in the ligaments, the ulna is the first to turn out.

Dogs with broad chests are liable to turning out, but their progress is already curtailed apart from that. The pigeon breast, already mentioned above, also results in "turning out". Too much climbing, and jumping, especially for dogs which are in the developing stage, can lead to a relaxation of the ligaments of the ulna, and therefore to "turning out". Whatever the cause of this turning out may be, it is always a defect which is most decidedly unfavourable to efficiency. An ulna that is drawn in is also always a sign of impaired efficiency; the body indeed should not rest on the forelimbs which support it, but the weight should be carried more between the shoulders. This last mentioned faulty position is generally the result of a small breast, and the dog is compelled to take it, to give more firmness to the ricketty overbuild; in this case, the broader the back, the more insecure the stand.

The forearm and the metacarpus, when viewed from the front should be straight. When the ulnas are drawn in as a compensation for this shaky position, this shows itself already in the forearm, but especially in the metacarpus, which extends more or less outwards, so that the paws, instead of pointing forward in the direction of the stride, assume an outward position like that of a soldier standing at attention. This is called the "French" or "dancing master's" position. For the dog when standing at rest, this position serves to compensate; it increases the steadiness of the position but its does not obviate

the uncertainty of the gait. When the breast is too broad and the elbows are extended, the forelimbs, on the other hand, incline together underneath. This accordingly induces a narrow or mincing position on the ground, with a stand in which the toes are often turned inwards. This position, in which the dog runs on the great toes, is the cause of a gait which is always tied, waddling and crossed.

If the forelimbs are not straight when viewed from the front, but form, like the so called "O" legs, a slight outward bend, this position which does not promote certainty of gait is called "bandy-legged". The expression "barrel legs" which is often applied to this defect, in error must be reserved for the hind legs. Deviations of the forearm from the perpendicular in the majority of cases, even as

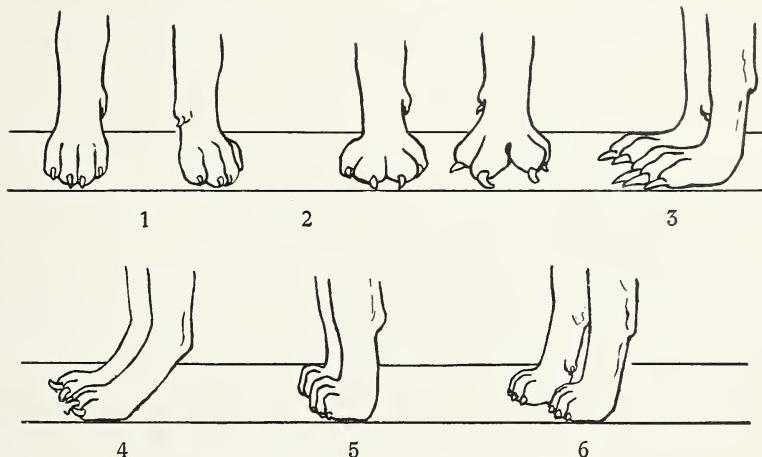


Fig. 355. IX. Fetlocks and paws.

1 Good well-closed feet, with firm toes, cat's paws. 2 Left, a weak paw, right, distended toes with long claws. 3 Paws with too long and too yielding tread, toes and claws too long, hare's paws. 4 Too long, weak fetlocks with in-growing claws. 5 Too steep, short fetlocks, club feet, worn-down claws. 6 Good formation of fetlocks and paws.

with visible crookedness or swellings in the root of the fore foot joint, can be attributed to weakness of the bones when young.

The metacarpus, when seen from the side, should not form an even continuation of the forearm; it would then be too steeply jointed, and would not help to absorb the shock when the legs are set down. On the other hand, the metacarpus, whose length must not be excessive, should not deviate too much from the perpendicular. An angle of from 25–30 degrees, formed with the continuation of the forearm gives most favourable position for a dog. If this angle is appreciably greater, this is described as "weak jointed". In such an event, and with a metacarpus that is too oblique, or when his ligaments lose their tautness, the dog when he is tired, will stumble forwards.

The paws should be round, vaulted above, and have close knit toes; when thus formed they are called "cat's paws". Flat paws with long toes are called "hare's feet". They hamper the powers of endurance, because like all flat feet, they do not absorb the shock in a resilient manner; moreover long fine phalanges with their joints easily lead to injury, slipping and sore feet. The metacarpus and the toes in the wild dog are strong and muscular, because they are used for scraping, and for holding the prey while it is being eaten; and for shepherd dogs they should have a similar formation.

The toes should be well knit to avoid wounding and the intrusion of foreign bodies. Toes that are flat, widely distended, open, or



Fig. 356. Bad position with weak steep-set hindquarters.

spread out, handicap endurance. With dogs, however, that work on a loose sandy soil (on the heath) a moderate distension of the toes is permitted, because this surface broadens the surface of the soles of the feet and prevents the legs sinking in too deeply. In the case of service dogs who exhibit this formation, inquiries therefore must be made as to the nature of the soil on which they work.

The soles of the feet of a service dog can never be too hard and solid; this could only happen in dogs who have too much running to do. The nails should be short and strong and suitable for scratching. Nails like claws, which can be heard when the dog treads on a hard floor are a sign of flat paws, incapable of much resistance, or

else they are indications that the dog lolls about without taking sufficient exercise.

The hind limbs, through the stretching of the joints, and the taking off from the ground, give the body that forward impetus which is transferred to the forequarters via the back; this is called the "follow through". I have already spoken at length of the vital importance of a suitable setting, and of long bones in the hindquarters. The more this position is secured by length of the bones, and the deeper the hindquarters, the more powerful will be the "follow through" and the more effectual will be the absorption of the recoil of the shock when stepping out and landing after jumping. This



Fig. 357. Backward position, the result of an obtuse angle in the hips, and too long shanks, steep metatarsus.

springy shock absorption which is only possible with a favourable position of the bones, spares, as we have seen, the joints, and increases the endurance of the dog.

When considering the position of the hindquarters, we must distinguish between a "tucked up" and a "backward" position. The first is a consequence of bones which were placed too steeply one against the other, or of buttocks that are too level; the hindquarters as a consequence are pushed too far under the body. The steadiness of the hindquarters is thereby diminished, the gait of the hindquarters is "bound", and the "follow through" is not good.

In a "backward" position, the hind limbs stand too far behind the centre of gravity, and the hindquarters will be wobbly. In order to hold them in equipoise, the dog must adopt a wide position and step accordingly. This backward position can be attributed to various causes. If it is the result of an over-elongated obtuse angle of the hips, and a disproportionate length of the leg bones to each other, — which is often the case with the shank bones when they are disproportionately long, — it is to be regarded as extremely unsuitable, and all the more so, because the steeper the metatarsus, the more obtuse will be the angle of the hocks. This position is frequently found in short, high legged dogs, they are "eye-wash" for the layman, who would have them in such a position in order to enhance the length, but apart from this, they are of no use in service. A slightly backward position of the hindquarters belongs often to a well proportioned shepherd dog. In that case, the perpendicular line drawn from the ischium tuberosity does not meet the back edge of the hocks, but cuts it, and runs just in front of it to the ground, meeting the feet there. This position can be attributed to leg bones of suitable length, which are well placed, one against the other; it secures a steady stand, a powerful take-off and springy landing of the hindlegs, and a generally good follow through of the hindquarters.

The hindlegs are composed of the upper part of the thigh, joined to the pelvis, the shank, and the metatarsus with the hind feet. Its skeleton is made up of the pelvic bones, the femur or hip joint, the tibia with the patella lying on the under and forward end of the femur and the fibula, and finally of the bones of the hocks; under which there are the very powerful ankle bones of the metatarsus and the toes. The articular conjunctions of the joints are formed by the hip joint, the knee joint, the hocks and the phalanges. The hind legs are firmly joined to the body in the sacrum through the pelvis. The very powerful muscles of the hindlegs have their chief attachments on the spinal column, and on the body muscles, but chiefly on the pelvis, the femur, the shank bone and the ankle bone.

The pelvis is composed of the ilium, the ischium, and the os pubis. The abdominal cavity is situated in the pelvic cavity which is formed on both sides by the pelvic bones. The pelvis also provides an attachment for a large number of muscles which are important for motion, and finally it should form the pivot for the conveyance of the forward motions of the hindlimbs over to the forelimbs, and for turning. Its powerful construction and correct position are of the greatest importance for the efficiency of the dog.

To secure this correct position, the strongest of the pelvic bones, the ilium is of the greatest importance. This ilium corresponds, in its functions, to the shoulder blade, and it forms the hips with its external angle, while the condyle of the femur is situated in the socket of its joint. If the ilium is steep, which is generally the result of insufficient length, the motion of the hind leg as it takes off, is more in an upward than in a forward direction. The transference of the motion via the back is therefore interrupted, and the follow

through detracts from the evenness and power of the motion. If the hindquarters have this position, it will curtail the depth necessary for the development of power (see Nos. VIII and III), and also the distance for the advancing of the hindleg. An ilium which is set too level can then be nothing else but too short, and the result of this is an angle which is too obtuse for the hocks and knees. The dog in this case will lack steadiness, the hindquarters will tread short, and the gait will be "bound". The hindquarters will give the impression of moving by themselves alone without any connection with the whole, the body will not be pushed forward in proportion to the capacity of the forequarters to take it up, and



Fig. 358. Overbuilt dog with level buttocks, steep thick shanks, cow-hocked.

the gait will lack advance. The most favourable position is when the ilium works in a position almost parallel to the humerus in the fore-limbs, when it forms with the femur an angle of from 80—100 degrees for the hocks.

Because the position of the ilium, covered as it is with clinging muscles, cannot be tested with the living dog, it must be judged by the formation of the fleshy part, i. e. that of the buttocks. Good buttocks run almost straight, they sink in a gentle curve towards the underside so that the ischium tuberosity lies somewhat deeper than the hocks. When they are sufficiently long, they then have room for strong muscles, and the hindquarters will have good depth. If the ilium is in a steep position, the buttocks will be precipitous or abrupt; if it lies too horizontal, the buttocks can then be described as hori-

zontal. The ischium tuberosity in that case lies nearly in the same plane as the hocks. If the highest point of the buttocks is higher than the withers, the dog is then described as "top-heavy". With grown up dogs, this top-heaviness is generally the result of a steep setting of the hindlimbs, and is then a fault from the judge's point of view. When the hindquarters are good, on the contrary, a moderate top-heaviness is not a considerable defect. Young dogs sometimes appear top-heavy in their growing time, this is, however, the result of uneven growth and the stretching of various parts, which generally adjusts itself later on.

The correct position and the good length of the femurs help to complete the serviceable construction of the hindquarters, begun by a good ilium, and at the same time impart to them the necessary depth. The knees should not be turned inwards; if this is the case, the shanks and hocks adopt an outward position, and the metatarsus again takes an inward turn. This position is described as "bandy-legged"; and it always gives the dog an insecure, swaying gait, with a turning motion of the limbs. This is equally true of the knees which should not turn out. If this happens, an inward direction will be imparted to the shank bones on both sides, the hocks will be drawn apart while the metatarsus must be turned outwards as a compensation. An animal thus formed is called "cow-hocked". To a certain extent the possession of cow hocks does not exercise an unfavourable influence in the gait (see further on), when the angle of the knees is good, and when especially it is the result of compensation for a certain "bandy leggedness" occasioned by long shanks. On the other hand, it can be unfavourable in a very high degree when it occurs in conjunction with an obtuse angle of the knee. The gait is then restricted, the hindlegs are brought forward outwards in a bend; they thus take a longer time, and make smaller progress forward, than when they step forward in a straight direction. With young dogs who are taken for training when their ligaments are still weak, cow hocks can be caused if the animals are allowed to remain for a long time on the chain; or it may be the result of frequent rearing on the hindlegs, when it is above all things a sign of weak muscles, but it can disappear afterwards, as the animals grow stronger.

The shank bone should be long and strong, but in its length it must be in proportion to the formation of the hindquarters as a whole. The same is true of the metatarsus; if it is long, and accordingly forms a good angle with the hocks towards the shank, one can, to adopt a word taken from the vocabulary of the horse, speak of "bow legs". When this happens in conjunction with a good angle of the knee, it is favourable for forward movement. It is different when the angle of the knee is obtuse, or when the shank is not sufficiently covered with muscles, or when the metatarsus is short, for it then results in a dragging and short gait.

On the hocks which lie between the shank and the metatarsus, lies the important duty of pushing the body forward. These hocks

then must be long, broad and deep; this length depends on that of the ankle bone, on whose tuberosity the tendon of Achilles is set.

The hocks, which are composed of single bones and tendons, held together with ligaments, should be firm and finely moulded, not coarse, and by no means spongy.

So far as the hind feet are concerned, what has been said of the fore feet generally applies to them as well; though indeed they must be proportionately stronger and longer, because their function is to impart a powerful forward push to the body. If they exceed the usual size, and the lower end of the metatarsus wears out as the result of ligaments which are too resilient, the result is described as "bear's feet". This is the special peculiarity of animals living in mountainous countries, where they can turn them to good advantage.

The dew or wolf's claws, which sometimes occur on the lower third of the inner part of the metatarsus, always interfere with the stand and the gait, because they compel the foot to adopt a spread-out stand, and a distended gait. They are sometimes seen only on one leg, they also occasionally come as a malformation in the form of double-spurs, and are then indeed most unmistakably a great handicap.

If a dog is well and serviceably built, as I have described, he will possess in the fullest degree that trotting body which he has inherited from his wild dog ancestors, and which has, to a certain extent, been still more perfected in breeding. The shepherd dog, as a service dog, requires that efficient body build which is the guarantee of endurance, for he uses this gait with the flocks and in other service. With such a build, he can also gallop for a long time, swiftly and enduringly. This the wild dog already shows us when hunting in packs and hounding his prey to death; this too is shown us by the war dog who, when necessary, carries messages for a long journey over wide stretches; this too we can see in the Police dog, when he follows a nimble criminal on a fresh track. An alternative form to this tried and trusty build, the so-called "galloping build" would be faulty and senseless, for the continuous seeking at the gallop, which is done by English pointers, never comes into consideration with the shepherd dog. This alternative form which begins to be seen in certain overbred animals, that is to say, high legs with a shortening of the body, is useful neither for a trotting nor a galloping body; it creates fliers, but only over a short course, for a redistribution of weight and a steep setting of the limbs are unfavourable for sureness, and length of stride in movement. Let us therefore inexorably cast out such animals which fall away from the ideals of the race; away with them from the hand of amateur if he is a true friend of the shepherd dog; and above all, away with them, and once more away with them from the breed. Such a decision is founded on a rigid, scientific judgment of the dog from the point of view of suitable body build.

When a thorough examination of the dog, while being held, has been concluded, there must be an investigation of his gait. This will supply the crucial test to decide whether the particular advantages and disadvantages in the body build, observed by a more theoretical

judgment, are really there in practise when the dog is in motion, and whether, and in what way, there may be a compensation towards improvement, or an emphasis of the faults. Optical delusions also, which are not infrequently caused by an unfavourable position when



Fig. 359. Short lazy step, commencement of the movement.

expense of his strength and his possible period of service. On this account we strive to perfect the build of our shepherd dogs by preserving the strain, and developing their vitality in breeding, so that the great services which they must fulfill, services which demand

the dog is at rest, will nearly always soon find their adjustment when his paces are tried.

A short test of the gait cannot but have a place in the Science of Judging. At that time, the dog with any "blood" in him, however faultily or unfavourably he may be built, will run the super-elegant vision of loveliness right off his feet and on them again, but indeed it will be at the



Fig. 360. Natural step, middle of the movement.

such endurance and strength, can be expected of them, and carried out by them as easily as possible.

The gait should be tested in a quiet walk, in a trot, and, if possible, when the dog is running free. Some dogs only show their paces to disadvantage when on the leash, which is a fault of the training.

or of the leader, but all of them are quite natural when running free, and conclusions can then be drawn as to their characteristics. The gait must be viewed not only sideways, but from the front and the rear.

The dog has three gaits at his disposal, walking, trotting and galloping. As a rule, he walks less frequently than he trots, that is when he is not constrained to be led on a leash behind his master, or follows the "spoor". A little uneven trot is his usual gait, which is accelerated when required, and can become very swift and progressive. The trot is the gait most frequently used in service of every description. In certain circumstances, a gallop is also used, for instance when at play, when hunting or when "courting". When walking and trotting, the dog goes "on the cross" that is, he does not go with a movement of both limbs on one side at the same time but when the near foreleg is moved, the off-hind leg is moved for-



Fig. 361. Long step, end of the movement.

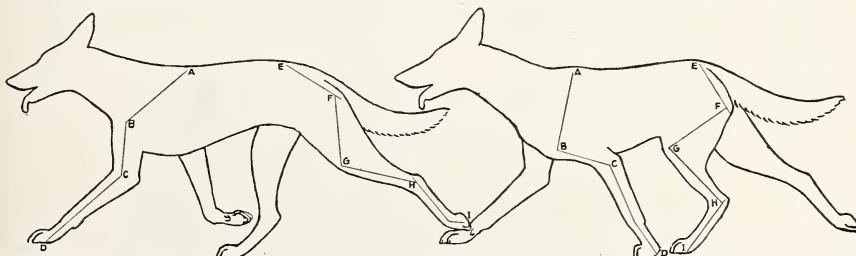


Fig. 362. X. Long sweeping trot, with back-action.

A—B shoulder blade, B—C Overarm, C—D Underarm with metacarpus and paw.
E—F iliac, F—G thigh, G—H thigh, H—I metatarsus and paw.

Left, the dog supports himself with the right hind foot which he has brought over the place of the right forefoot. Right, the dog supports himself on the left forefoot, which in a moment will step forward. The Advance; after the left foreleg has begun its motion, the hindleg takes a step and pushes the weight of the body on to the right foot which, in the meantime has been completing its step and so on, this is the „follow through“.

ward with it; so that as regards the other pair, the off-foreleg is moved with the near hindleg. In movement, the dog naturally balances himself. The quicker the gait and the more the dog extends himself, the more easily he overcomes air resistance and brings his centre of gravity nearer the ground. The neck is stretched out in a fairly level position, and carries the head only slightly extended

forward or not at all. The body must be carried forward without any sideways swing. The tail is carried raised and stretched out to the rear, when moving quickly, (but not when walking), so that it may act as a rudder.

While dealing with the question of gait, I would like to call attention to what has been said about the judgment of the dog when



Fig. 363. Short trot.

standing, and would suggest that a comparison be made of the different diagrams of the dog in motion, and from the photographs for which I am especially indebted to Dr. Gegenbauer of Schäftlarn



Fig. 364. Leg action short trot.

near Munich, and also to our late Curator of the Stud Book, Herr Kestermann of Greiz, and to Herr Schaeffer of Dresden.

When making a step, a foreleg first advances forward, the hindleg which is on the opposite side stretches itself, takes off, and thus pushes the weight of the body on to the foreleg which is just ad-

vancing. This hindleg comes to the ground, while the foreleg, which is on its side and now in a position very much to the rear, sustains the body on this side right behind the foot which is advanced. At the same moment, the hindleg corresponding to it completes the same movement. This forward pushing movement of the hindquarters is called the "follow through", and not merely the "thrust", while

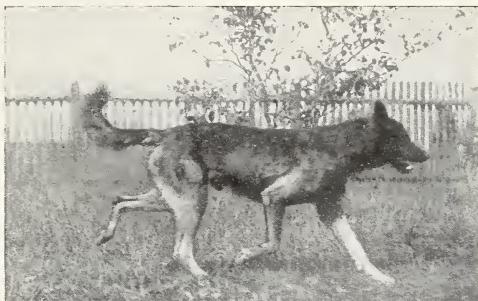


Fig. 365. High step behind, long trot.

the stretching forward of the forelegs is called "the advance". I have already fully explained before on what both of these movements depend.

The dog is to be thoroughly examined when stepping, not only because the movements when succeeding each other slowly can be



Fig. 366. Long reaching trot with back-action.

well observed and followed by the eyes, but also because a correspondingly good trot can be developed from a good advance, and a strong powerful follow through from the walking gait.

In trotting, which is an accelerated form of stepping, the corresponding fore- and hindlegs are lifted and placed on the ground at the same time. The hindlegs take a sharper bend, and stretch themsel-

ves more vigorously — the more this is done, the quicker the gait — the weight of the body consequently is not slowly pushed on to the particular foot, which is advanced, (to be taken up and supported by it), but it is flung forward. For a moment while the feet are being changed, the body swings free in the air (see No. 366). If this swinging continues for a long time, one can speak of a flying. trot. It is well within the power of a dog leader to give the impression of being dragged along by apparently holding back the dog, and then giving him free rein, and thus to hoodwink the layman. This artificially stimulated action is obviously without any significance at all for the estimation of the natural gait, and its suitability for service. One immediately makes such dogs to be shown running free so that the uninterfered-with, natural gait may be observed.



Fig. 367. Trotting.

In a short trot, the hind legs tread behind the place left by the foreleg on the same side. The quicker the trot, the further the hindlegs advance on to the place occupied by the forelegs; and indeed even over it. This progressive stepping out of the hindlegs, however, is only possible in a well-built dog with a long body (see Figs. 363—366, and No. X).

If the "follow through" is only effected by a powerful stretching of the joints through the muscles of the hindquarters, the dog is known as a "leg-goer" (No. 364), if on the other hand, the forequarters take a share in the transference of the follow through by the action of the easily lifting dorsal muscles, such a dog is accordingly called "a back-goer". A "back trot" spares the dog, the hindquarters can step further under the body, the gait is springy, the endurance is accordingly increased, and the power to turn is greater; both of which qualities are important for the dog with flocks and herds, and when on public service. The dog who has a "leg trot", on the other hand, tires himself all the quicker, the more faulty the cooperation with the back and the transference of the motion. To strengthen

the dorsal muscles of young dogs by making them gallop, play, hunt, and romp with their own kind is to bring up "back-goers". A premature employment in breeding, whether as sire or dam, weakens the back.

The natural trot of the dog goes level with the ground, and should be neither stepping pure and simple, nor show the so-called "high-action" of the high trotter. The stretching of the forelegs is not so tense as with horses, and the bringing forward of the legs is accordingly less firm and more supple in accordance with the more



Fig. 368. Gallop.

loosely knit body build of the dog. The more evenly the dog treads with a smooth roomy gait, the more ground will he cover accordingly, and the more favourable will be the forward motion and the endurance. The roominess of the stepping forward depends, as we saw, on the freedom of play in the shoulders. In the test run therefore, the position of the shoulder and the opening of the angle of the shoulder, when the forelegs are brought forward, is to be especially observed.



Fig. 369. A long gallop.

The advancing of the forelegs depends on this, and not on the shooting out with outstretched joints (a stilted) or stepping gait), or on flinging them out high with bent joints ("action"). Such goers use up their muscular strength unnecessarily; they are frauds, they catch the eye of the laity, but they "cut no ice" when a serious test is made in a suitable place. The wider the shoulder angle (A—B—C in No. X) can be opened when advancing-(for this, a good position of the shoulder

along with a length of bones which is in a right proportion to the whole is necessary), the better will be the advance, which indeed, without a good follow through, will be useless. When examining the carriage of the shoulder, this also must be observed whether the foreleg which is bearing the weight gives in the elbow and bends outward. It has already been explained on what the follow through depends. The descent of the limbs follows after the bending of the joints, while the placing of the feet on the ground is the result of a decided stretching of the hindquarters. A dog who lifts the hindquarters high, instead of stretching them, with a sharp movement from the hocks and then shoots them backwards, is a high trotter, and cannot accordingly bring his hindquarters under his body, the result being that the gait will lack follow through.

If these afore-mentioned points in the testing of the gait are examined from the side, it must first be observed whether the dog



Fig. 370. Climbing a slope.



Fig. 371. Jumping off a slope.

is coming towards the observer, or going away from him, and whether the forward motion follows in a straight or swinging sinuous line, for this is an indication of a weak and yielding back. Further, a look out must be kept for a mincing, distended, or broad tread, for a crossing gait, and finally, for the slow mowing-like sideways forward pushing of the hindlegs; all of which are defects in gait which result from the above-mentioned faulty position.

The gallop is a continued succession of jumps. It is developed through the dorsal muscles which exert themselves by relieving and lifting the forequarters. Through this transference of weight, the hindquarters are more heavily loaded than the forequarters; the hindlegs, which are bent in their joints, accordingly come more under

the body by a powerful contraction of the muscles, and jerk the weight of the body forward where it is taken up by the two outstretched



Fig. 372. Jump from a steep bank into the water.



Fig. 373. Jumping down.

forelimbs. The two galloping pictures (Nos. 368 and 369) demonstrate this occurrence very clearly. The more the dog gallops from the back, that is to say, the more the dorsal muscles have a share in

the work, the more enduring will this gait be. The "leg-galloper" is soon tired; he uses up his forequarters and is slow in turning.

The jump, finally, whether a long or a high jump, or climbing, is a special intensified gallop-jump of particular utility, and is usually



Fig. 374. Jumping a fence, after the take-off.

developed out of this gait, and seldom from the standing position or a shorter gait, when it is of very limited efficiency.

The gallop and the jump cannot be made the objects of any special examination. The eye would refuse to take it all in. Agility



Fig. 375. Jumping a fence.

in the overcoming of obstacles — by jumping and climbing — is the ideal aimed at in training. Speed, endurance, and high efficiency are only shown by a well built, powerful, properly kept and well cared for dog.

With this, I conclude my remarks about the examination of full-grown dogs. I have already said something about the judging of pups and young dogs. Generally speaking, the criteria which apply to full grown dogs apply to these with equal force. Careful attention must be paid to the usual defects of youth, such as weakness of the ligaments, incomplete chest development, and defective position in the "stand" or in the gait. The greatest care and restraint are necessary in the judging of very young animals. So-called "beautiful children" do not always, or rather very seldom, develop into beautiful men and women. Paragons of Loveliness are never conspicuous for their efficiency.



Fig. 376. Jumping a fence, before landing.

In conclusion, I would like to add a word about judging from pictures, which may perhaps be important for potential buyers. A picture can give no information about size and strength, unless a scale of measurement is given as well. On the other hand, it can give a very good idea of expression and body proportion when a picture of the dog is taken with this end in view, as explained in Chapter 2; that is, a direct side view of the dog in natural pose, standing on all four legs. This unfortunately is the case in only a very few pictures. If this is not done, considerable defects can be camouflaged by a clever posing; just as, on the contrary, when a dog is photographed in a bad position, it can give the impression of defects which the dog by no means possesses. In any case, I recommend that a drawing be made, on the picture, of the corresponding position of the skeleton, and it can then be proved whether height, depth of breast, total length, development and length of bones are in a correct proportion to each other. The pictures which

are given in this Chapter can serve as practice in judging from photographs which were taken, not only as examples of the good points, but also of the defects of our dog.



SCHOOLING AND TRAINING.

'A wise man is favourably disposed to a dog, which is well brought up.' W. v. Goethe.



As the last two Chapters were occupied with the physical development and external construction of the shepherd dog, we must now turn to the formation of his spiritual and mental characteristics. I have already spoken at length about the nature and characteristics of our dog in Chapter 2, and I stated there that the secret of all Education and Upbringing was the right recognition and use of the foundations already laid.

Nature gives to every life that is brought into the world, in addition to its inherited tendencies, (i.e. the results of the experiences of its ancestors) the possibility of self-education. This

is inaugurated first of all by the example of the parents, chiefly by the mother, from whom the offspring learns the first principles and all that is necessary for the battle of life. It then makes its way, through these experiences gained in life, whose number and combination hold out

to it the possibility of a successful issue in this struggle. In addition to this, which depends on all kinds of circumstances, for the dog which is taken into association with man, and admitted thereby to a fixed routine of certain duties, (though for the wild animal, on the contrary, life itself furnishes an abundant schooling without any further ado), a purposeful training must be taken in hand through the systematic influence exercised by his owner, and by a skilful development of what is required in his vocation.

If this training is neglected, or begun too late, the trainer will not infrequently have to deal with a young animal already made half-wild through neglect, or ruined by a kennel existence. On the other hand, a training that is too severe, and loveless will cause the growing dog much agony of soul, and his possibilities will not unfold, because his trust in his trainer, which is all-essential, is lacking. A sound training does not aim at producing shy, broken slaves with no will of their own, nor machines whose efficiency depends on external impulses, it keeps itself within bounds, and, though checking the undesirable characteristics of the pupils, it subordinates its private predilections to a higher aim, and tries to produce creatures whose service, out of their joy in their work, is perfect liberty. This training then must know how to awaken the inborn capacities, and to develop them, and must, in addition, tone down what is superfluous, strengthen what is weak, and guide what is erring into the right path.

The training, even as the later finishing off of the education, must not be broken off too soon; for when this occurs, the dog becomes lazy. He then loses all his good behaviour in the house, and in the street, and reliability in his work; he also deteriorates and acquires all kinds of vices, which are not so easily eradicated. In such a case the owner is alone to blame for allowing him to go to ruin in the kennel, or for keeping him in the house without sufficient watchfulness, care, and love.

Not everyone is suited to be an instructor, and still fewer to be trainers. *If we still have, a comparatively small number of really reliable working dogs in all departments to-day, that is not to be attributed to the dog's lack of ability to discharge his bounden duty, but to the incapacity of the leader.* The question of the service dog, i. e. the question of the possibility of profitably employing dogs in every kind of service, not only in finding out tracks, is, as I said in Chapter 2, far more a problem of the leader than of the dog. That dogs are able generally to discharge for themselves duties which are not difficult, and which come within the scope of their nature and their gifts, they have proved often enough to intelligent and experienced leaders. In real life too, they are often confronted by more difficult things, and by good fortune they sometimes actually carry out more exacting duties without our knowing it, because the observer lacks the knowledge to grasp what the dog has accomplished.

A trainer who has an excitable, hasty, and uncontrolled disposition will never obtain good results. A young man who is easily

irritated, and rough is absolutely unsuitable, neither will a man who through laziness is yielding, easygoing, and good humoured, go very far. To attain good results, the trainer must have an even disposition, decisiveness and clearness in giving his orders, and a loving understanding of the animal and his nature; and finally, he must have experience. Experience is gained not at the study table, nor from a book; it can only come with *practice*, as the result of constant resorting with dogs, with dogs of every age, and at every stage of development. On this account, all directions for training have only a restricted value; *they can only indicate the general outlines, and their chief function is to stimulate individual observation and reflection.*

For a long time now, training by means of force, which was formerly recommended, as the only right method, has been ousted by the so-called "Method of Scientific Training and Adjustment". This is quite sound so far as it is founded on a practical knowledge of the soul of the dog, but it is only a meaningless catchword, when, relying on a shame-faced reluctance to go against "Scientific Facts", (which is typically German), it believes that it can thus do away with its unwelcome data by theoretical pronouncements and concepts. Let us remember what M. Wundt says in "Geist unserer Zeit" (The Spirit of our Time), "Belief in Science is the superstition of our age." The representatives of both extremes have overlooked and do still overlook this fact only too willingly that their precepts are not of universal application, and that "all dogs cannot be combed with the same comb".

The Science of Training has long ago elevated this fact to become a *principle*, that attention must be paid to the natural endowments of the individual; and what holds true in the case of children is equally true for dogs, with whom, even if their spiritual emotions are simpler than with humanity, attention must yet be paid to the endowments of the race. Judicious leaders had already recognised this for a long time, and had thereby attained their successes. The stubborn dog must be treated differently from the yielding dog; the willing dog who delights in work, is not to be treated the same as a "Weary Willy or a Tired Tim"; the puzzled, and perhaps, stupid dog, differently again from the sulky, or the refractory dog; the daring, differently from the timid; the rough, differently from the spoiled darling; and finally, the bundle of nerves differently once more from the fiery enthusiastic dog, who only too easily becomes, in unskilled hands, an inveterate "ne'er do weel". For the average leader, the sturdy, not too sensitive dog will be the best. High efficiency will only be attained with him, when the training is adapted to the requirements of the learner.

There is also a difference in physical and mental aptitudes in animals. One, thanks to his good build is enduring, and fitted for prolonged effort, long jumping and high climbing. Another is quickly fatigued, and not fitted for exercises of agility, which make great demands on his powers. One brings an object willingly and unerringly, another does the same only under protest, or not at all, or perhaps

only as the result of painful experience when learning. To one again, which is perhaps a splendid worker in many respects, nose-work is hard; another, on the contrary, shows himself particularly fitted for this, as the result of a good experience when young, generally helped on by a super-efficient sense of smell, and wise training.

The instructor and trainer must himself be a psychologist; he must learn to read the soul of the dog, and his own too. He must observe himself closely so that he shall not only be prevented from underestimating the dog in his human arrogance, but also that he may be able to give the dog suggestions and help in an intelligent way. *Whoever can find the answer to the question "How shall I say this to my dog?" has won the game* and can develop from his animal whatever he likes. This answer, however, is not so easily found. The dog does not understand us just as we wish to be understood, nor as often as we believe, and often enough too, we do not understand how we can set up a soul affinity with him. This is due partly, to the fact that we do not take the necessary trouble to do so and partly, because, as we saw in Chapter 2, the dog's feelings, thoughts, and accordingly all his endowments, are grounded on a different fundamental sense.

In his training, the dog cannot, like children, be influenced by a series of accepted principles of what is lawful and forbidden, of what is Right and Wrong, imparted and willingly accepted. The trainer must know how to impose his will in quite another way. In the one case, advantage is generally taken of the feeling of willingness and unwillingness, which is impossible with the animal. In the case of dogs, we must go further and base our method of training on the natural impulse which leads the dog to man his master. According to Koelsch, "every creature is connected from within with the surrounding world by a certain number of instincts which order his relation to things external in a regular way". These habits have become fixed with the domesticated dog through practice, and an inheritance which has lasted thousands of years with men who looked after him, and by a service which was instilled into him as the result of a feeling of dependence, which we call love and fidelity for his master, and zeal and instinct for work. It is certain that these habits also have nothing to do with feelings of willingness and unwillingness for the animals who stand highest only have this advantage that they can subdue those contrary impulses of whose opposition they are conscious; yet for all that, the sentiment of dependence and need of work are already feelings which are highly developed, and when we found our training on them especially, we get right to the very nature of the dog, and facilitate both our task and his.

One cannot begin too early with the training; it must be commenced, as we saw in Chapter 3, with the nestlings, in order to develop in them a love and a trust, first of all in man and then for their master and keeper. The breeder who can occupy himself with his pups at this time, lays a good foundation. The pups must find with their master what they seek, i. e. reciprocated love, food, and, when required, protection. Children easily tease nestlings, they frighten or they

irritate them into disobedience; at this time therefore they are not ideal playmates. By thus occupying himself with his pups as they grow up, the breeder fosters the activity of their senses by making an impression on eyes, ears, and nose, which, further awaken attentiveness, develop courage, and accustom the little ones to the human voice with its varied intonations.

Whoever is able to engage in such a playful training with his young dogs as they grow, for any length of time, will soon be able to perceive their various idiosyncrasies and gifts, and can already make a beginning of curbing here, encouraging there, and generally preparing for the time when schooling must begin in earnest. Thus something can be done towards securing obedience, and coming when called, bringing on command, watchfulness, giving tongue, energy, and the instinct to ward off, and finally development in the use of the nose, in which care must always be taken that everything is done in love and kindness, without any preceptible constraint, and that there is a development of trust in the awakened nature, and also of mental alertness which is now the chief consideration.

The impulse for work is born in our dogs. This does not mean that they have recognised work as a moral duty — with how many men this is also not the case can be seen in a terrible and disastrous way to-day. How then shall we produce that in dogs which is so often absent in man who stands higher in the scale? — yet a body fit for service, full blood, strong nerves, and mental alertness all impel dogs to work. What has been inherited from their wild and domestic dog ancestors thus finds expression and urged, and still urges them on to regular work for our purposes. The shepherd dog wishes to work, not for work's sake, but because it affords him the opportunity for living out his life. Thereby once more we have a justification of that saying when applied to work in the right meaning, "Man learns to work through work", as Frederick the Great told us.

Our shepherd dog has learned to work through work in a service extending over thousands of years with man, in the yard, and with the flocks and herds. I have already explained in Chapters 1 and 2 how his characteristics became formed and consolidated for service with the flocks, and how they have proved themselves suitable for every other kind of work as well. If we wish to bring up a dog and train him for a special duty, we must lay hold on that which is already in him; only thus shall we be able to attain a successful result, and produce useful work. It is indeed possible to train the dog for service by other methods, but drill never produces the same result as a training which penetrates the soul of the dog, taking into account its characteristics and identifying itself with its natural endowments. In my opinion, it is only such a training which is the real "psychological method of Direction", to use a modern catchword for once in a way. The dog already has too much, and too high an independence to work as a mere machine, and nothing more.

The countryman's dog receives hardly any training at all, he is self-taught; he learns from the example of his mother, from his

older companions, just as the Swiss dairyman's dog, about which Professor Heim (whom I quoted in Chapter 1) has told us. His knowledge is founded on his natural endowments, habits, and the examples of others. The shepherd does not treat his dog any too leniently, on the contrary, the pupil must be keen on his work; laziness and carelessness are not tolerated. *The shepherd dog is willing to be kept under the strictest discipline: one thing, however, he cannot endure, and that is to be continually ordered about, for he is naturally too independent for that;* when this does occur, he loses all his keenness, and nerve. He wishes to be well employed in work, or else he will "play the giddy goat", "all on his own".

With dogs for flocks and herds, schooling begins early and extends over the whole of their lives. An old flock dog then has grown up with his many-sided and various duties, so that he, thanks to his acquired experience, will often enough arouse admiration even in those who know him best by his wonderful, even, independent, if not what one may call "thought out" work. It is the same with the hunting dog, who is also made useful in the open field. Should it not therefore be possible for the service dog to be trained to become a police dog in six or eight weeks? He can indeed be taught (for the actual instructions can be based on the foundations of his former training), when the trainer takes sufficient trouble, and has the necessary understanding for such a task. It is just at these two points only too often that the difficulty occurs with official, as well as amateur leaders, which results in faulty service and the various failures in tracking work. Indeed for this uncontestedly difficult work of the service dog, an instruction which lasts but a few weeks or months is all too insufficient to ensure success. It demands continual practice under circumstances which are constantly new and varied, and also an internal rapport between trainer and dog. The work of the drawing dog — the most difficult a hunting dog can do — as I described in Chapter 1, after Herr Löns — is not learned all in a day. Therefore that unfavourable verdict that "according to the standards of modern Science, the service dog cannot work on the track", is false and misleading. If it were correct, it would not be said in the light of scientific attainment of the present day, but "according to the methods of direction now in fashion". Such high efficiency cannot be obtained by a six week's drill, at anyrate not in ordinary service, and above all, not in nose work. Despatch dogs with their comparatively easy service of running to and fro between leader and deputy leader can be made thoroughly efficient in a few weeks, but that, however, is not a service which demands much individual initiative, obedience and faithfulness are sufficient. Every other form of service, however, demands a careful, protracted training and continual practice, if the dog is to be really useful, and remain so.

Service dogs are now generally instructed together in large classes. This has its advantages, for dogs as well as the leaders who are being trained, learn by example, the ambition of both can be utilised, and the dogs learn — which is a most important test of obedience —

to repress early on the tendency to be distracted by their companions. There is also this disadvantage that generally there is very little opportunity to thoroughly deal with the dogs individually, because the chief aim of this instruction is to bring all the pupils up to the same average of knowledge. If, as I already said above, the brief education which results from these courses of instruction is only regarded as a foundation for further work, it can be considered as a sound preparatory school. Thus from goods turned out by mass production, it is still possible to complete a work of art by means of a subsequent meticulous attention to details.

The same is true of the training which some amateurs entrust to a professional dog trainer to impart to their dogs whether it be for use with the flocks or for other service. Instruction with the flocks should extend at least over one tending season, from spring to late autumn, which will make a dog at anyrate reliable as an assistant. This instruction with the flocks can be shortened and interrupted because, chiefly, it only gives examples of those duties, the habit for which is already naturally preserved in the life of the shepherd dog, by reason of his inherited characteristics so that they shall not atrophy through disuse, and accordingly be lost to posterity. Every other instruction in his vocation must, after the dog has returned to his owner, be carefully developed further, because the pupil in such training has only received a preliminary notion, which is insufficient, and indeed not of much use, and which would be soon lost again for the breed, if the dog is not continually exercised. *By our work, and in making our dogs work, we wish to attain this goal, i. e. the characteristics naturally possessed by every animal shall be so consolidated by continual use, and finally made permanent by breeding so that they are transmitted and inherited, just as happened at first with the aptitude for service with the flocks possessed by our dogs.*

Many amateurs have not the time, and do not feel that they have the capacity to instruct their dogs in the performance of their proper duties, and some dogs have thus been deprived of their general training. If these owners are at all in earnest about the breed, and their love for their dog, they entrust him to a professional trainer. Some of these are good, and some are bad; some are careless and only take up dog training as a means of making money; with such, dogs are soon ruined body and soul, and the owner may consider himself lucky if he does not receive his dog back again spoiled and neglected. In such cases, a report should be made without hesitation, not only to the Breeding Association, but legal action should also be taken for breach of contract and failure to fulfil the conditions as to careful keeping and instruction. What is a curse for the breeder is also a curse for the trainer, and in both cases, it is the inevitable result of herding too many dogs together, and that is generally due to greed of gain. A careful trainer under the circumstances will never take more than two, or at the most, three pupils, because he cannot devote himself sufficiently to a larger number, and the dogs in such a case must especially be kept caged in a kennel. I have already delivered

my soul on the subject of a kennel existence. Not a few successful trainers have foundered on this rock; their very successes have brought them too many offers, and instead of refusing to train a quantity, they have attempted to work with too large a number of pupils, and so they spoiled their reputation. The amateur, who seeks a trainer, must choose him with special care, he must enquire thoroughly into his methods of training, he should live near the place of instruction, and make frequent visits so as to inform himself fully as to the condition and progress of his dog. He should know all about the keeping, the feeding, the security of his dog, and the probable length of the course of instruction, and should take care to have all the details of payment, compensation in case of loss etc. all carefully drawn up in writing. The master should take over the dog in the place where the training is given, for it is obvious that a dog who is accustomed to a trainer will not at first have the same success when he begins to work with his master. If the results are good, and the dog works satisfactorily, and returns a sound dog, well cared for physically, and mentally acute, then the owner must not grumble at the bill, for the trainer has well earned his fee.

Every activity depends on the dissociation and the association of the nerve irritations. Our shepherd dogs generally have very susceptible nerves, and therefore unsuitable confinement in a kennel can easily lead to diseased over-sensitiveness, which as we saw, transmits itself to the progeny, to the detriment of the race. When an animal is kept properly, it is a good thing to have a keen sensitiveness in the receptivity of impressions, excitability and mental agility which can be turned to good account in bringing up and training. The trainer, however, must not allow himself to be taken in by a quick understanding, and he must see that the dog thoroughly grasps and remembers what he has been taught. The lively, active dog will gladly try to withdraw himself from a long enduring constraint, for him generally, a frequent and brief repetition is sufficient; while with an animal which is not so receptive, a long practice for the first lesson is already necessary. Thus the quickly receptive dog, whose mental agility can generally, often enough, lead to mistakes at the commencement — (which are no signs of inherent stupidity, but rather the contrary), — not infrequently perplexes the trainer, who works too much by rule of thumb, for the dog grasps too quickly, even before he has completely submitted himself in will.

Further, a difference must be made between the receptive dog and the animal that is "slow in the uptake", just as between the stubborn and the yielding animal. The dog draws a very clear distinction between the ideas which are easily grasped and those which are hard to understand, but when these are placed before him in their proper sequence, he grasps them, for the dog, like the blood horse, gives the highest efficiency when trained properly, while the dog who is only stubborn, or too yielding is a most unacceptable scholar.

We follow the impulses given by nerve irritations on which every activity depends either apparently without volition, or else

we propose them deliberately to our wills after we have become conscious of them. According to Zorawski, the will is the result of the impressions which are made on, and apprehended by the senses. One impression we receive directly through the senses, and the other intermediately from the connection of the working of two sensations at the same time. This connection of such simultaneous impressions causes an association of irritations, which is fixed so firmly by repetition, that the arousing of one impression is sufficient to call the other into activity also. The impulses received from the sensory nerves are traced back to their centre, which is the brain, thence follows their association, of which the result once more is seen in the desired movement and conduct. The irritations which most frequently, and in a similar way, are brought to bear on a living organism certainly result in a distinct mode of behaviour, which is only apparently unconsciously carried out without any deliberate volition, for it allows itself to be put out of circuit, or to be influenced by the will.

Let us hold fast by this principle, and take notice of this fact in training, that the dog cannot understand our spoken words as so many people sometimes believe, that is, he does not grasp the meaning of words, but that on occasions, the sound of a word of command, or a motion indicating the same must give the impulse for the performance of the required activity. When once this is realised, we have a starting point from which we can develop a real understanding with him. *We must always employ, and that too in the same tone, and with the same gesture, the same word of command, encouragement, warning or sign when training the dog to behave in a certain desired way, or when impressing on him the necessity for desisting from something else.* The pupil pays attention, not only to the sound which comes from the mouth of the trainer, but to all these taken together. This has no connection at all with the animal's power of reflection; this does not enter into his ken, because the dog does not possess the faculty for reflection in our sense of the word. A breaking of these most elemental rules would rather have something to do with the human capacity for thought than with that of the dog. Whoever says for one and the same thing, at one time "sit down", at another time "lie down", and a third time "come doggie, come to beddy-bye here" imagines indeed that the dog can understand this, and does not realise that this is quite out of the question. If we ring up at the telephone a number other than we wished for, we shall be given the wrong, and not the right connection. If an actor gives a wrong cue, another actor who adheres strictly to the lines will be placed in an awkward predicament, and indeed may "dry up". So too, when we give the dog a different word of command from the one to which he is accustomed; the right soul connection is lacking, and the dog will either fail to carry out the order, or he will do it wrongly, if he does not, — and here is the difference between an intelligent character and soulless work, — catch the correct meaning from the look, the pose, or the movements of the trainer, or concludes from oft-repeated practice what the trainer really required of him, and surprises us with the right

obedience in spite of our mistakes. If too, for example, an owner in the street, says to his dog (who is rather given to wandering) "come", stay here, come, come" and the dog indeed remains there by him, wagging his tail in a friendly way, if he does not obey because he understood the meaning of the command, he does it because he came under the spell of the beloved and trusted voice of his master, through the words which were spoken to him, and which reminded him of the duty (which he had come to love through force of habit), of walking along the street by his master's side.

If we have discovered the right way of arriving at a correct understanding with the dog, and watch ourselves very carefully that we make no mistakes, we must try to influence the will of the dog by training, practice, and habituation to obey our orders even when they run counter to his inclinations and nature; as for instance, to remain lying down, when his master goes away, and vice versa, to suppress behaviour which is especially natural to him, if it runs counter to our wishes, such as stealing, and hunting birds and game. The more we understand how to enter into, and feel with the nature of the dog, the more do we facilitate the performance of the duties we exact from him. It is therefore obvious that, as for certain simpler exercises, especially for those so-called exercises in discipline, the performance of them can be regarded as instinctive, so, on the contrary, for those that are more difficult, e. g. for those that are directed to the development of special aptitudes for service, this cannot be left to a certain mental cooperation on the part of the dog, because in service, he is always being confronted with the discharge of duties which are new and ever changing, *which he must understand from his upbringing, and from the store of experience which he has accumulated during his life*. This is seen most clearly when the dog is with the flocks, but also in every other service too, even in the simple duties of the watcher. "Man-work", and especially tracking work, always reveals such varying circumstances, for which the dog cannot be so thoroughly drilled that he immediately jumps to the right conclusion without any further ado. We must, however, take into consideration, right from the very beginning the possibility of this willing and intelligent cooperation of the dog. Let us in this connection only think of the training of the soldier, and realise that, after the foundations of unconditional and absolute obedience have been laid, the chief part of his training does not consist in drill. Drill is not the "be-all and the end-all", it is only a means to an end; it is also not so much the specialised and habitual training for the performance of certain actions on the word of command, but rather the preliminary education for intelligent initiative when the occasion shall demand it.

Trust is a sine quâ non, and obedience is the foundation of every training: both go hand in hand, and both are inseparable. Blind and servile obedience is not rooted in trust, but in fear, and only rebels when out of reach of the whip. Such service we do not demand from our dogs, but an obedience which is joyful and always willing, founded on love for the master, and as such, (as we have already seen) founded

on the satisfaction of a natural craving, which therefore must be consolidated by a wise training from earliest puppyhood. With a young dog who is obedient in this sense, who waits upon the eyes and the mouth of his master, who comes joyfully when called, even from his feeding dish, or from his companions at play, because he knows he will be rewarded for his obedience by a kind word and by an affectionate pat, by a special tit-bit, or, as the highest reward, by a sharing in the activity of his master: *with such a dog every thing is possible later on, for joy in work is combined with its accomplishment. This, as the outpouring of the power accumulated in the dog, is the result of sound nerves and a serviceable body build: and here again it is a matter of breeding, and training both directed to a special purpose with a definite goal in view.*

We saw above that in education we must work by means of sense impressions, made permanent on the intelligence of the dog by constant repetition, till we arrive at the desired discharge of duty, or the breaking of a bad habit. Unfortunately we must in this respect, dispense with the dog's chief sense, his sense of smell, which first comes to the fore in all nose work. Yet we must never forget that *the sense of smell plays a most important rôle, in connecting us with the dog*, and that it is the medium and avenue by which progress in upbringing, and the training of an entire love for the master, and confidence in the trainer are attained. We must therefore often give the dog, during his work, an opportunity for taking the beloved scent of his master, which is conveyed to him by the hand patting him in approval, which corresponds to the rewarding kiss we bestow on our children. Further, we can in some cases, evoke the assistance of the smell in education by allowing the dog first to have a good smell at strange and unaccustomed objects, so that he may persuade himself that they are harmless and innocuous to him. This is the case with several of the means employed in training, and can be very useful, as for instance, when it is desired to impart confidence to a shy dog, or to take away from a spoilt, nervous dog a shyness which was acquired through the stupidity of a former trainer, or through some accident. We can also cause him to feel our approval by means of the taste, by giving him tit-bits, and we can also use this to break him of certain bad manners such as nibbling and snuffling. His feelings also serve as a means of conveying to the dog our approval or disapproval, and they also afford a certain amount of help while practising him in certain exercises. We must, however, avail ourselves chiefly of *hearing and sight* when we wish to convey to him any special impression.

Our chief means therefore of influencing the dog are eye, gesture, and voice. The dog is in awe of our glance, and the sound of our voice conveys to him command and prohibition, praise and blame, affection, warning or punishment. The whistle is nothing but a variation of the voice, while gestures with the hands and other wavings supplement it. The power of the human regard and the voice must not be underestimated; a good trainer can do everything

with both of these, without any other means at his disposal for punishment, if he only understands how to keep the dog keen on work by a progressive and intelligent system of exercises, adapted to the characteristics of the dog to lead him on the way from what is easy to what is more difficult, before he realizes that he is really confronted by the latter.

I have already said that the words of command should be given with the same intonation and sound as much as possible, for the dog does not understand the sense of words especially, but relies chiefly on the sound of the voice. Therefore the man who is training to be a leader must first learn a kind of canine "Esperanto" for going round with the dog, as was emphasised before. The fully-fledged leader has already enough to learn and to understand without postponing his language course too late. The various words of command should be short, clear, and very distinct from each other. Whether they are spoken abruptly or in a drawling way is regulated according to the manner of teaching the exercise. Commands must be given quietly, in an ordinary voice; *hastiness, loud shouting, or roaring only puzzle the dog*. The bond which unites his soul with that of the trainer is so delicate, that any disturbance in the former is conveyed to the dog and only makes him "mithered" and refuse.

Similarity in the words of command has many advantages and is indispensable when many dogs are being trained together; it also facilitates a change in trainers. Fr. Schmidt, however, was quite right, when, in an article in the S. V. Journal, he laid emphasis on the great importance which such words of command can have for police dogs. Criminals would very soon learn these words of command. In case of need, they would try to use them with dogs that were on their track, or had brought them to a standstill, and thus at least a certain amount of unreliability can be caused. Officials in Police Service are therefore recommended to train their dogs to perform certain exercises only with themselves, and to accustom their dogs to certain words of command and tones of the voice.

Commanding by signs depends on daylight and distance. In some cases when the same signs are always employed, the giving of such can facilitate the carrying out of the exercise. The choice of appropriate signs rests with the trainer; the best and one that is always available is the whistle, that is whistling with the mouth, when the trainer has good teeth, for its sound can nearly always carry far enough when working with the service dog. In this natural whistle, the trainer can impart a certain personal element, so that the dog can always recognise it with certainty; while on the other hand, if the whistling is done artificially, a misuse by rowdies and criminals is only too easy.

From what has been said then, we see that when a change of owner takes place, the new trainer must thoroughly well acquaint himself with the previous methods of training, and must have a rehearsal of the words of command; and this can only be secured by working in company with someone else. The story that a dog newly

bought, or one which has just come from his trainer can do nothing, and that the seller or the trainer has been guilty of a "breach of contract" can often enough be traced back to such carelessness and inexperience on the part of the new owner.

In addition to the special words of command which the dog will learn along with the duties taught him, every trainer will choose for himself a number of words for encouragement or repression during work with an inciting or warning sound such as "good dog", "now then", "steady", "no", "hah" etc. These words should be always given in the same sense and the same tone of voice, for the dog attaches a special meaning to them. "Hah" for instance should always convey to the dog a warning to keep him back from forbidden behaviour, from picking up scraps in the street, chasing cats, etc. and must therefore not be used for mere awkwardness, or even for disobedience once it has been committed. In such cases, it is much better to say "come here", to repeat the exercise, and to take him on the leash.

The eyes must supplement the voice. The dog can read from the glance of the trainer all that is necessary to know about the state of the trainer's soul; he knows whether he is pleased or joking, in earnest or finding fault.

On account of the dog's acuteness of observation, and the ease with which he is influenced by moods, the trainer must keep a careful watch over his demeanour, and over the dog, and he must curb all feelings that find too easy an expression. I have already said that a noisy word of command, shouting and sudden movements are to be avoided, because they make the dog unreliable. *The trainer must first learn self-control before he can control the dog.* He must also always know how to adapt his methods to the nature of the dog. The trainer must also watch his own moods, for the dog must possess a love of work if he is to do good work — especially in tracking — and this is especially effected by his state of mind, in which again the dog is especially dependent on the trainer. He must never go to work with the dog unwillingly or in a bad temper, but he must be keen, in order that he may make the dog keen and enthusiastic with him. If we regard ourselves at all carefully, we shall find how often we allow ourselves to be influenced by our feelings in our actions and motives. "The fault is in ourselves, not in our stars, Horatio". Whoever tries to seek the cause of his troubles not in himself, but in external influences, will finally end in superstition, such as belief in the influence of Fridays, the number "13", and the behaviour of a poor old woman. This indeed the dog never does, he only believes in his master, who therefore must take care to bring to his work the right sentiments, and must understand how to arouse and keep the same in what is now his pupil, but later on will become his colleague.

Selfishness is the most natural characteristic of life, because it administers to the chief duties in life, the preservation of the individual and of the species. *The dog must seek for, and find the fullest satisfaction of his self-seeking in his master, because he gives him pro-*

tection, shelter and food. We describe the expression of this primaeval self-seeking as love for his master, and we build on this, and on the habits of activity which are implanted in the dog, the exercises which we give him to do, and the general means we employ to impart the education. It would therefore be entirely wrong to go to meet a dog who refuses to come because he is playing, or because he is afraid of being punished. On the other hand, by stepping backward, the trainer awakens the habit of following the master, while if he approaches the dog, he would only encourage the habit of warding off, which would then be called into activity, and which would make him fly to avoid being caught. It would also be wrong to look round after the dog, to remain standing still, or to turn round when a dog shows himself averse to being led on the leash. Young dogs will often sit down in indignation at the sudden pull of the leash, or even throw themselves on the ground. If the trainer looks around, he stops his own moving forward, which alone entices the young dog forward and makes him follow as well; while if he remains and turns round, this will only lead to rebellious, annoying, and senseless staring.

The dog obeys the calm, clear-headed trainer willingly and with full confidence. He obeys him even when he is harsh and rough, but when the trainer is not really gifted, it must be admitted that the true joy in work, which is the foundation of success, is lacking. With a thoughtless slap-dash individual, the dog will refuse to carry out even the easiest exercises. Let the trainer therefore examine *himself* when the dog makes a mistake, or does not understand an exercise, or fails in obedience, and let him ask "Where am I at fault"?

In certain cases, the trainer can help, and stimulate the dog to follow or to work with him only by his own example. Thus in training him to follow on the leash, as already indicated, and in making him sharp so that he does not hold himself back, and appear to be afraid of an assailant, further in climbing the stairs — which for a young dog is sometimes a very formidable ordeal — by practising jumping, and climbing, with him and by working in the water when the dog shows himself water-shy. The example and teaching also of an older dog, who is reliable in his work, can have a tremendous influence. A young dog leashed with an older dog is made amenable to the leash and reliable in coming when called in play. If indeed the pupil shows himself too unruly, his four-legged mentor knows very well how to express his meaning in the most forcible doggy language over such unnecessary tugging, and this very wholesome disciplinary training does not fall too much on the shoulders of the master. The example of a reliable dog is most useful too in the breaking of bad habits. Barking, watchfulness, and sharpness are most easily taught with the help of such an assistant. In certain circumstances as well, the good behaviour of other animals on the street is helpful, but the teaching dog in all cases must be held fast and carefully, else there is a danger that he will alienate himself from his pupil through jealousy, and spoil his own influence.

The dog must be praised for prompt obedience, and for work well done, and indeed the praise must be given at once, especially when the dog after initial stupidity or opposition, when first set the task, afterwards does it correctly or shows himself willing to do it. Kind words, supported and emphasised by a glance or by a nod, patting or stroking — letting him sniff — “shaking hands”, and the bonne bouche are ascending degrees of praise. The highest reward, however, is to allow the dog to do his favourite work including a free run and play. A dog, and especially a young dog, can never be praised too much. Praise strengthens his confidence in his master, and in himself. Moderation is advised in the awarding of the bonne bouche, so that the dog may not become a “gourmand”.

For the sensitive dog, who craves love, the neglect of, or the absence of praise is already a rebuke; a shaking of the head, a rebuking tone, even “hah”, said sharply, can hurt his feelings.

A rebuke is already a punishment for a well brought-up dog. The aim of punishment is improvement, not vengeance, for the dog has no conception of Right and Wrong, in our sense of the words at least. What appears to his doggy point of view to be quite right and very pleasant is often the very reverse to us and accordingly “taboo” for him. The dog recognises the force of prohibition and permission, for he has come to a clear understanding of them by his training. If he transgresses them by allowing the “Old Adam” in him to break out, he can connect cause and effect when the resulting punishment follows. If, however, the misdeed was committed some time previously, and he has forgotten all about it, he can no longer connect a punishment with it, but he will bear it as something unjust, and as a mental or physical maltreatment, according as he is frightened or beaten. *A real punishment must only be given in close connection with what has preceded it, never for mere clumsiness, but always for disobedience and defiance.* If he shows himself obedient after an act of disobedience, he must not be punished for the former misdeed, it would only confuse him in his relations with us, and with reference to our principles of training. If a dog refuses, when being practised to do a certain exercise (which otherwise he can be relied on to do correctly), but comes obediently when he is called, he must not be punished, even when he comes hesitatingly, he must rather all the more be praised. The exercise which he refused to perform must then be very quietly repeated as though it were an ordinary practice, and in such a way that there is no possibility of the repetition of the disobedience. The self-conquest involved in coming is already punishment enough. We must “make the punishment fit the crime”, and also the criminal. Blame, which perhaps does not affect a hard dog, is already something very severe for a yielding and sensitive animal.

There are any amount of punishments which a thoughtful trainer can discover for himself, when the occasion arises. Reproof, or the withholding of praise, are the mildest forms, and should be, and are generally sufficient in the majority of cases. Then there is tying or shutting up (“C. B.”), which is particularly severe for an animal

that loves his liberty, following at heel, and in certain circumstances that too on the leash, making him lie down, and when necessary on the short leash (of which more anon). Chaining up can be resorted to, to make this more severe. Let it be short and high so that the dog can neither sit nor lie, and this will be especially irksome for him, but care must be taken that the criminal does not unexpectedly and unintentionally commit suicide by hanging himself. In this connection, much can be done to add to the severity of the punishment by making him wear the breaking-in or studded collar. A pilferer can have the dainty, which he took with felonious intent, and which was rescued from him, placed just out of his reach. A fowl murderer can be confronted with the corpse of his victim, while a poacher can have an intermittent thrashing, i. e; a stick can be attached to the loose end of his chain, which will get in his way as he runs, but which, on his poaching expeditions, will also beat his hindquarters.

Starving the dog is no punishment; he will not understand why he has been allowed to go hungry, and will only regard it as neglect. On the other hand, to allow him to go hungry for a short time can be a very good method of training when a spoilt darling has no appetite for plain food, but turns up his nose and waits for a bonne bouche more worthy of his aristocratic palate. In such a case, the despised feeding dish is taken away, and later on is once more remorselessly set before him until he realises the properties of hunger as a sauce, but care must be taken that the "poor dear doggie" is not supplied with food from other quarters, where the heart is master of the head. The very best training for man and beast, alas, has been only too often spoiled and ruined by the folly of our fellow men.

While working, a short jerk on the studded collar is an effective punishment, but indeed it must not deteriorate into a senseless jerking here and there. An excellent punishment for obstinacy is to make the dog "crouch" and then to give him the command "forward", and thus to compel him to crawl along the ground.

For a dog who is not working close by his leader, the shepherd as a punishment throws at him a clod of earth, dug up with the scoop on the end of his crook. Leaders of service dogs throw the chain at them, this, however, is risky when it hits their legs. This should be effective enough to bring the dog to his senses, and make him realise that he is still under discipline, though he does not happen to be close to his master.

The sling (catapult) answers the same purpose. It makes it possible for the leader to keep the dog under the closest control even when he is working at some distance from him, and threatens to get out of hand; in this way, failure, warning or punishment succeed each other quickly. A timely grain of corn thrown at the hindquarters can work wonders, even with an old dog, and make him take heed, while the clever shepherd dog will easily and quickly learn that this more or less painful missile comes from his master. That, however, does not matter; it will always be a warning to him and a sign of the necessity for care when he sees his hand go into his pocket. If, however,

familiarity has bred contempt and this is not enough, the leader must once more set his wits to work on finding out how "diamond can once more cut diamond".

The whip is the last and most drastic method of training. A dog must never be beaten with anything but a light switch or pliable whip. Above all, he must never be whipped with the leash gathered up in the hand; for he would easily be made shy of it, and would try to back away when he must be led, for he would remember the beating which he had with it. He must never be slapped with the hand, the hand for the dog should be that which helps, praises, pets, but never punishes him; it should be something which is always sought out and never feared. An occasional slight slap when working, on the cheeks and on the thighs, is no beating and no punishment, but only an emphasised incitement.

The whip should never be in the hand of the leader when he is accompanied by the dog on walks, and never for any length of time during work, not so much for the sake of the dog as for the leader himself. The owner of a dog who never goes out without the whip, furnishes a mischievous testimony to his incapacity, and we already know by experience how some ladies give this impression!!!

A whipping should never be given unless absolutely necessary. Many dogs cannot bear this above all; they become entirely ruined and "hand shy" as well. Other hardy dogs with a superfluity of undesirable liveliness sometimes deserve all, and much more, than they get, and they can very well stand it. But a whipping does not have very much effect on them. The rascals merely shake themselves to get rid of the beating — which is thus consigned to oblivion. It is indeed difficult to deal with such dogs. The only effectual treatment is constant watching, and unremitting severity, by insistence on absolute obedience, till the dog grows older and wiser, and always plenty of work. Then there will be a decrease of these storms, which otherwise may possibly last to the end of their days.

If the whip must be resorted to, it must be used first as a threat, by being shown to the dog or by being cracked. The dog, who must be on the leash, must be made to sit before his trainer, or to "crouch". When a dog is thrashed, it must be on the flanks, not on the back, nor on the forequarters. Whoever allows himself to become angry when administering a thrashing, or to lose his temper deserves a thrashing himself.

Every time he does not pay sufficient attention during work, and for every thrashing, the dog must be called to come and be tied up; he must then be made to sit, and in this position, which corresponds to the soldier's "shun", he must take his punishment. After the punishment, the leader may allow him to "shake hands" to show that "bygones are bygones". Proud dogs are particularly grateful for this formal reconciliation.

In bringing up and training the dog, all kinds of accessories and implements are used.

Unfortunately, the muzzle is still ordered by the Law to be used in many towns; and during an epidemic of rabies, all dogs, who are running free must wear it, wherever they are; otherwise they are caught by the dog catchers, and the owners are fined. Fierce and biting dogs ought never to be allowed to run without this protection, for the sake of the owner himself, although there is no muzzle that can be absolutely guaranteed against biting. Only a leather covering, fastened tight round the whole mouth, as used in Belgium, offers perfect security, but the chafing of the dog is thereby increased. With every other kind of muzzle, even when they fit well, and cover the entire mouth, chance injuries can be caused by the fang teeth, and more frequently even by the metal parts of the muzzle itself. The muzzle must be so roomy that when fastened on the collar behind, it must project at least $\frac{1}{2}$ " beyond the tip of the nose, so that the dog can open his mouth wide, which is absolutely necessary for proper breathing, and for interior cooling when the tongue is stretched out. It should not be bound on so as to be too close a fit in front and prevent the dog from drinking whenever he has an opportunity, and wishes to avail himself of it. The neckband of the muzzle

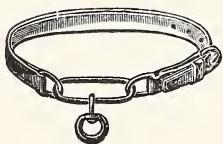


Fig. 379.
Collar with three links.

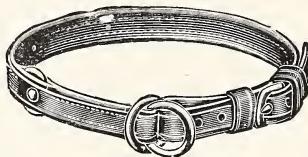


Fig. 380:
Leather Training Collar.



Fig. 381.
Chain Collar.

must be suitably wound round the dog's collar, otherwise a persevering dog can rid himself of this encumbrance with his paws.

A dog must not always wear his collar; he should only wear it, when he goes out and runs free. It is useful to have a small metal plate on the collar bearing the address of the owner, but never hanging down like a bell; it must be attached close on the collar. A collar must not be considered an ornament for the dog; he must create the impression he is to make without any adventitious aids. All that attracts the eye to itself spoils the general effect; for this reason white collars are specially unlovely, also all trinkets and "fandangoes" ribbons, and other special "ornamentations" on the collar. The smaller and the less obvious the collar, the better it is. All collars which are fastened with a buckle are useless, they must be strapped up too tight, they hinder breathing, and swallowing, they chafe the hair, or else the dog can worry himself out of them. The only really serviceable collars are the flat collars, of which the three-linked is the simplest, though to tell the truth, it is also the least lovely. Flat leather collars are good and serviceable, though I prefer chain collars, which are easy to put on, never fall off, and are almost entirely hidden by the hair. Many novices fail to understand the purpose of a collar,

and always fasten the hook of the leash on the wrong ring. This must be attached to the free ring, otherwise a dog who is thus attached can easily withdraw himself from the collar.

The chain serves to tie up the dog, it should be from about 3'—3' 9" long, of nickel steel, with a snap hook on a swivel at each end,



Fig. 382. Dog Chain with swivels.

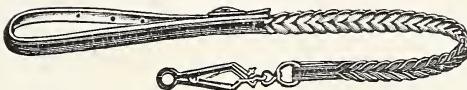


Fig. 383. Leash.

so that the chain cannot become twisted up. A smaller ring is generally found 9" from each end, in which the end of the chain can be fastened; some chains also have a swivel in the middle as well.

A leash should be from about 15"—20" long and of broad plaited leather, with a loop for the hand above, and a small hook, or scissor-



Fig. 385. Coupling Chain.



Fig. 384. Coupling Chain.

shaped catch at the lower end. I always prefer the more reliable hook to the scissors. The shorter the dog is led on the leash, the more secure he is. The leash in this case is drawn over the arm, and the hand grasps the leash below. For coupling two dogs together, a coupling chain or a dog-coupler is necessary. This chain should be from 10"—12" long, and made entirely of steel, or with a strip of leather between, on the ends of which are snap hooks with swivels.

Finally, for those who cannot whistle well, a small dog whistle must form part of the necessary equipment for a dog. The best for this purpose is a small flat whistle, but the most convenient indeed is the mouth. This is always available, and requires no hunting for when required.

Among the necessary equipment for the work of training the dog the various breaking-in collars are of great importance, which,



Fig. 386. Dog whistle.

until it is necessary to lead the dog on the breast tackle when seeking, are based on the purposeful control of the dog by exercising pressure on his neck. These are flat collars, with blunted spikes fastened to the inner side to increase the possibilities of the control to be exercised. If the dog strains himself forward on the collar and the leash, he pulls the spikes into his neck, while a short tug on the breaking-in collar serves as a sharp incitement or as a punishment.

The simplest form of breaking-in collar is a flat leather collar with studs, or a studded collar. There is also another form, con-

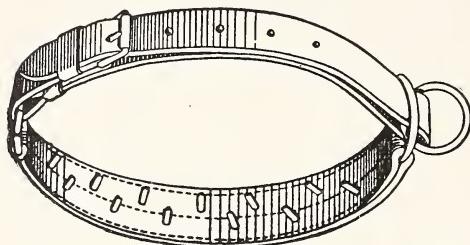


Fig. 387. Collar with Spikes.

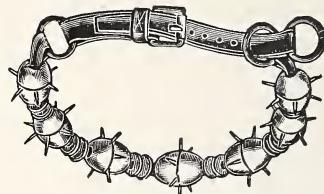


Fig. 388. Collar with Spikes.

sisting of a row of moveable wooden knobs with metal spikes; this has a sharper effect and can even injure the hands of the leader, when taken up too quickly. In any case, this collar should only be used for breaking-in, while the studded collar can also be used at all times with an impetuous dog who is not tractable on the leash. The



Fig. 389.
"Torquatus" Training Collar.

"Torquatus" breaking-in collar, which is a nickelled chain band fitted with studs has proved its worth; it can also be turned round while being worn so that the studs do not touch the dog, although in that event there will be some risk of injury to the hands of the leader. Broad collars fitted with sharp studs — real spiked collars — were formerly, often, and even now are occasionally used for watch dogs and protection dogs to guard their throats against beasts of

prey, and the grip of a human v. Merey's "Signal Collar", which is made of different coloured revolving leather slips, and fitted with a number of movable metal buttons. By means of this collar, short coherent information can be easily conveyed. It is therefore recommended for service dogs, for protection dogs (with the police, game-keepers, frontier Custom's Officers, country police, and hunters), who are trained to return to their independent guard, or to the house of the leader.

For the dog who is working on the open growing fields, the collar ought to be dispensed with so that he will not become hung

up in the bushes or thorns; this is also true for the Ambulance dog, for the police dog, and for all dogs in these and kindred services, and in tracking in the woods off the leash. Also when working with crimi-

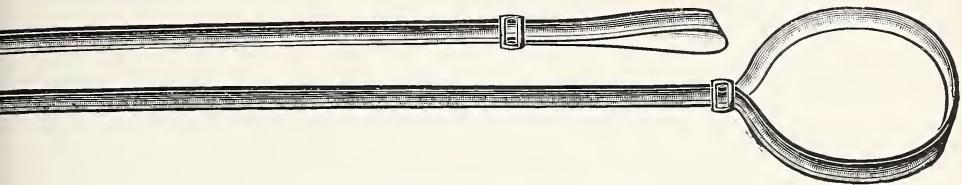


Fig. 390. Hunting Leash with Collar.

nals, or when expeditions, which will involve a fight with men, are in view, the escorting dog should be without his collar, for it affords a good hold for doing him harm. Many various service collars are made by which the dog can be freed not only from the leash but from the collar as well; the simplest of which is the hunting leash and collar combined, of which we give an illustration.

Breast tackle is often used instead of a collar in practising and in actual training to avoid hindering the breathing; this is an arrangement of leather straps which extends from the back, over the forequarters and the lower sternum. This does not afford such an effectual control of a dog which is too impetuous, as the leather or the studded, collar, and if such is required, the studs must be so arranged as to work on the prosternum and the shoulders. The breast tackle is unsuitable for large dogs, when it is desired to lead the animal at an easy gait, because the leader can exercise no real control over the dog, and an energetic dog, wearing a breast tackle, will quickly tire his leader out. The breast tackle is therefore unsuitable for shepherd

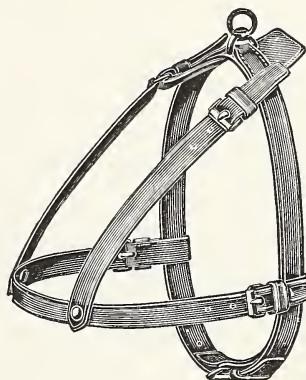


Fig. 391. Breast Tackle.

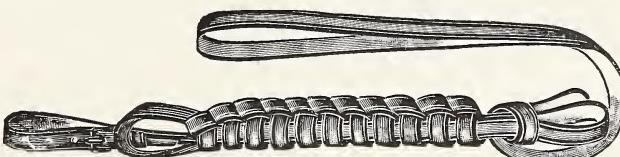


Fig. 392. Long leash or Strap, rolled up or plaited.

dogs on the street; in addition, a multiplicity of leather contraption creates a bad impression and spoils the hair.

A somewhat longer training leash than the one mentioned above, a narrow leather thong of 30"—36", has been lately preferred when

it is necessary to make the dog tractable on the leash, and in leading him on service. The loop of this can be taken in the right hand, while the left can hold the leash or stroke the dog. For other exercises, and when seeking, the long leash or strap is necessary. This is a compact, small leather line from 18"—30" long, which is also fitted with a loop and a hook. If attached to a strong hemp cord, it can be lengthened to 60"—90".

The mouth strap is useful as an aid in breaking a dog of the undesirable habit of barking. This is a soft leather strap, about

$\frac{3}{4}$ " broad with pieces for the cheeks, which is fastened to the collar by a neck strap, and put on like a muzzle. This mouth-strap, however, must not bind the mouth tight, for the dog must have room to open his mouth, without difficulty, to breathe.

The dumbbell, or training dumbbell, is used to train the dog in fetching, it is a smooth round piece of oak, from 12"—15" long, and $1\frac{1}{2}$ " thick in the middle. It is strengthened at the ends and carries wooden pegs so that it can be easily lifted from the ground by the middle. For use in the house, a dumbbell of similar dimensions

can be made out of a roll of sacking well stuffed with straw, shavings etc.; wooden pegs must also be sewn in the ends of this straw sausage. At the commencement of the training, it is best not to choose the heavy dumbbell, but one that is lighter, which is not strengthened at the ends, but at the same time, it must be one that is made of hard wood with pegs at the

ends. For the first attempts at seizing or fetching, a mere whisp of straw knotted in the middle is sufficient.

The Hegendorff Training Collar is said to facilitate training to lie down. It consists of a studded collar of special construction and two leather loops held together by an adjustable front strap which can be attached to the collar. The loops are placed over the forelegs of the pupil, drawn together and fastened. A dog who wears this cannot possibly rise by himself, for at every attempt, he draws the studs

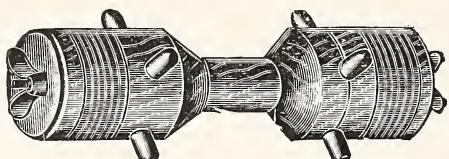


Fig. 393. Dumbbell for fetching.

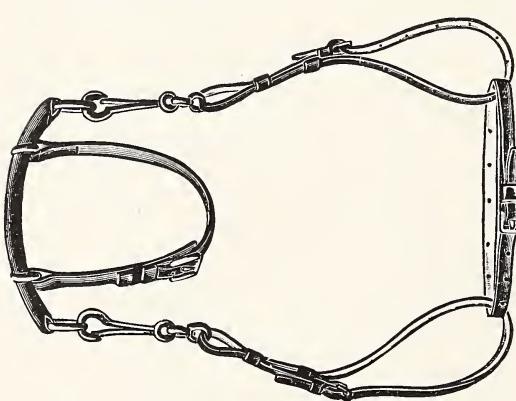


Fig. 394. Hegendorff Training Collar.

into his neck. Lately, two shorter additional leather straps have been provided which are said to facilitate the holding of the dumbbell.

The use of the catapult has already been explained.

For a whip, only a light riding switch, or a soft leather whip made of plaited thongs must be used.

For practising steadiness under fire, any pocket pistol with blank cartridges will do very well, just as well as "the real genuine article" — provided that it fires when the trigger is pulled; at the commencement, even a small cap pistol, beloved of the children is not to be despised, while, to break the dog of being light-shy, any pocket electric torch with a brilliant light is sufficient.

Easy natural obstacles can be used to teach jumping and climbing, such as ditches, fences, hoardings, walls, and finally wire fences.

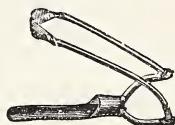


Fig. 395. Catapult.

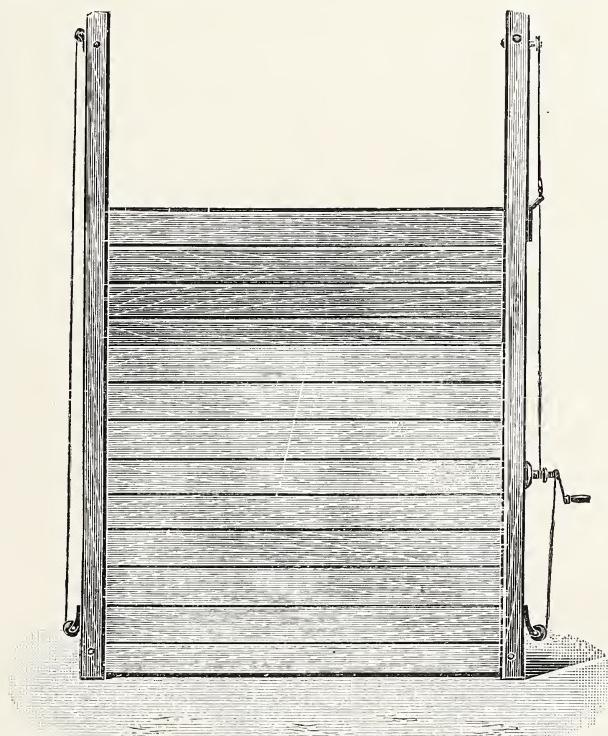


Fig. 396. Adjustable Jumping and Climbing Wall.

Such lessons are also helped by an adjustable wooden obstacle, of which the accompanying picture will furnish an adequate explanation. Anyone can easily make a permanent hoarding, adjustable to any desired height, by inserting other boards, even as a light hurdle, level and broad on the top, can be improvised out of pine branches, or

common heather. The boards for the climbing wall must be well-fitting and rough, but not splintery, so that the dog will avoid all injury to his paws. A hard surface before the wall facilitates the commencement of the climb, but as the dog must learn to take the wall from both sides, sand or tan must be sprinkled on the ground in front and behind so as to provide a soft landing, otherwise, there will be an overstraining of the muscles of the forequarters, (which are very much brought into play in climbing), or a jarring of the forelegs is possible. All stones, pieces of broken glass, etc. must be removed from these and all other obstacles as well.

For practising the attack on a man, the amateur can utilise a straw dummy, at the beginning at anyrate, which, however, will never be better than a make-shift and affords no real guarantee that the dog will learn from this to attack a living foe; on the other hand, every decent shepherd dog ought to do this of his own accord, when the occasion demands it, without any special training.

In order to make the straw dummy, a visit must be paid to an old clothes' dealer to procure an old suit, boots and a hat, for it is obvious that no part of the dummy must carry the scent of the owner or of anyone belonging to him. The suit must be well stuffed with straw, while the trousers must be placed inside the boots, and well sewn on, and the bottom of the sleeves sewn up. The right arm must be provided with something in the shape of a hand, and a stick, or a cudgel must be sewn in. The head is made of sacking, suitably shaped, stuffed with straw, on which a mask has been firmly fixed or painted, while the hat completes the *tout ensemble*. The dummy must have a broad girdle round the body, under the jacket, by which it can be attached to a wall or a post. Two short straps should be fastened as high as the shoulder blades, and should serve to keep the dummy together, so that the upper part of the body, while being attacked by the dog, shall not fall limply over. All parts of the dummy must be very strong. The material must not be of too fine a texture, otherwise the dummy will have only a short life. To impart a certain amount of movement to the dummy, a piece of long string must be attached to the right wrist. This string passes through a ring, which is sewn on the right elbow, and through several other rings, over the wall, to a place from which, unseen by the dog, an assistant can waggle the hand which carries the stick. If this dummy be laid against a wooden partition, or in the corner of a shed, (which is advisable at the commencement), the legs also can be made movable. Through a corresponding opening in the wall, a light twig can be placed, with its end tied to a boot of the dummy. The assistant takes the end which is behind the partition into his hand, and works both hand and foot at will.

Real attacking of men, such as is demanded of Police dogs, can only be practised on a living man, who for the purposes of the experiment takes the role of the criminal. The actor must be a man who possesses an understanding of dogs, but he must not be employed as assistant for the other exercises, otherwise he would be betrayed

to the dog by his smell, and either the attacking of the man would not be practised in real earnest, or else the other exercises would be spoiled. The experimental criminal must be no woebegone "two ounces of death on toast", but must be so well instructed that he can play his part with appropriate conviction. When the dog has become fierce towards him, he must no longer confine himself to mere feint attacks or to weak parrying, but must regard the dog as a very real enemy, without seriously injuring him with a stick or by an ill-advised shooting in the face. For his own protection, the criminal must be supplied with an impervious suit, which to-day is most expensive. The picture shows such a suit which can be completed by the addition of a light fencing mask to protect the face. In place of the copiously padded trousers reaching to the feet, it would be better to use high riding boots, or leather gaiters, which leave the man freer to move, for the safety suit makes him very ungainly and very hot. It is therefore regarded as no plum of the theatrical profession to "strut the boards" as "Bill Sykes". Whoever wishes to make a safety suit for himself, or to order one from the saddler, must use stout sail cloth for the purpose, which must be lined throughout with light fustian, with be a thin padding of Capoc (Indian cotton) which must be made thicker in vital places like the neck, the arms, and the thighs. The picture gives the other details without any further explanation.

Unfortunately, such a safety coat creates a very unnatural impression, and there are some dogs who will attack a man thus protected with the greatest fury, but refuse, and are perplexed when told to attack a man who is not clothed in this way. The more natural, and the less out of the common the safety suit is, the better will this be for the work of the dog. The best would be a leather suit specially strengthened at the vital parts — somewhat similar to the jacket of a chauffeur — through which the dog can occasionally pinch, without being able to really bite. Such a suit to-day is about as accessible for most people as the moon!!!

Some trainers when practising the attack on man, content themselves with a safety sleeve drawn over the right arm, against which the dog can be trained to attack, as the only place to grip. Apart from the fact that when attacking in real earnest, this can lead to disastrous consequences, it is also impossible to avoid serious injury to a man so scantily protected. I do not recommend such a method of practice



Fig. 397.
Safety-suit.

by any means. It goes without saying that the wretched "Sykes" must be especially protected against all injury.

An assistant is also required for a number of other exercises, especially for nose training. The more intelligently he does his part and enters into the spirit of the game, the lighter will be the work of the dog in learning, and of the leader in teaching. Leader and assistant must therefore be of one mind for any work which is carried out together, both over the duties of the assistant, and over the help which he must afford the dog. When practising tracking, a frequent change of helper is necessary. The best people for these exercises are two dog friends working together, for both will also learn something new at the same time. This is also a work in which boys and especially "Boy Scouts" could help with great advantage. Verb. Sap. !!!

When practising the seeking of what is lost, special scent bags are useful; they should be pockets about 9" long, made of coarse unbleached calico, and fairly thick, filled with sawdust, peat dust, chopped straw, or chaff, which anyone can easily provide for himself. The sack will be given to the assistant who has to lose it, that he may impregnate it with his scent. For this purpose, it must be carried in the trousers pocket, or in the arm-hole of the sleeve, or better still, it should be kept for some time in an old boot or stocking. These sacks are preferable to pieces of wood, because the coarse linen fibre more easily absorbs the particular scent or smell of a man than smooth wood. They must be made of material of a quiet colour, so as not to catch the eye of the dog or the leader at a distance.

For work in the water, a light floating dumbbell, and a floating dummy are necessary. This last must be about as big as a 12—14 year old boy, and must always be clothed. Any old clothes belonging to the trainer will do for this purpose. The dummy is stuffed with straw, and made buoyant in addition, by bladders, or better still, with cork waste. The dummy must not be made too heavy, because, apart from this, it becomes heavy through saturation in the water. It must not be made stiff inside with a skeleton of rods or tubing, on the contrary, the limbs must be moveable so that they may afford the rescuing dog an easy hold and not act as a rudder, which might steer dog and dummy round and round in a circle.

In conclusion I should like to say something about the clothes of the trainer himself. Naturally he can take or leave my advice as he thinks best, but this at any rate must be remembered, that everything that flutters, or flaps disturbs the dog, and distracts his attention quite unnecessarily. It can even scare a young dog, even as a hasty movement of the trainer. Nothing should be worn loose, and the overcoat must be well buttoned up.

Before we turn to consider the various details of training and schooling let us deal with the question that is sometimes asked as to which sex, the dog or the bitch, is easier to teach, and more suitable for general service. In my opinion, I most certainly prefer bitches, but the question is not so easily disposed of without further ado. According to Liepmann, the female sex possesses the greater

sensitiveness, and this has a close relation to the power of receiving impressions, and to carrying them into activity. The bitch is also more amenable to educational influences, and more on the alert for general and special instructions given by the trainer, but she is also more alive to mistakes and to anything that goes wrong in the training, in other words, it accordingly requires more mental finesse to master her soul, than in the case of the dog. This can be verified by every friend of the dog who has any experience in training.

The dog generally is "made of sterner stuff", he is more self-conscious, he has greater independence, he is more prone to take a line of his own, and — which is an inheritance from his wild ancestors,— to roam. He does not feel the strong compelling attraction to nest, home and master that is characteristic of the bitch. The bitch, on the other hand, is more primitive in her feelings, for it was not Adam who was the first at the beginning, but Eve, the All-Mother, who existed as Creative Life. The separation of the Sexes only resulted much later in the course of Evolution, when the apportioning out of the duties of life had attained to a very high state of perfection in the Monad. This separation of the Sexes made a distinction also in the duties to be performed by each for the preservation of the species. On the one hand we see Creative Power in sumptuous profusion, securing and attaining the goal of the Male by a wholesale and prodigal lavishness, and therefore with an emphasis on the external, while in the female, we find rather an inner coordination, confined therefore to certain well defined limits, for Conception, for the Bearing of the Fruit, and for the Care of the Young. This tendency of the duties of the Male outwards, founded as a whole on the distinction in the sexes, and not on the Monad, is explained by the instincts we see in Man to-day characteristics, for which, in the course of the evolution of the Male Sex, an attempt has been made to find a moral justification in the Doctrines of so many Religions down to Mormonism.

On the other hand, the fact that the female duties preponderate is based partly on diametrically opposite, partly parallel, endowments which are, however, more sharply or less strongly impressed. Again, on the other hand, the evolution out of the Primordial Being, and the incessant reunion of male and female influences in the creation of a new life explain why there is not a sharp distinction between the aptitudes of the different sexes, but rather a coalescence of characteristics, by which those which rightly belong to the one sex appear in one to be entirely repressed, while those which appear to belong more properly to the other sex find expression.

Let us now return, after these remarks, to the bitch once more. She too is primaeva in her feelings, she also, in accordance with the evolution of her sex has a more strongly developed interior life than the dog. She is more submissive, more amenable to influence, but also more steadfast. She is accordingly more dependent, more reliable and more careful in nature and work. She is less given to deviations from duty, and where these occur, there are sexual reasons. All this

she indeed changes in times of heat, some more than others, but this always remains a transitory exception to her usual condition. It seems to me therefore that the bitch deserves the preference, both as regards the relationship to the master, and from the point of view of sexual susceptibilities. It is easier to train her, she grasps more quickly, her memory is more retentive, and she will, at least with an understanding leader, work more willingly and more carefully than a dog. A good bitch can be keen and sharp like a dog. These qualities are in her blood by reason of the fact that hers is the task to fend for the whelps, while fidelity to her master is, as we saw, mother-love translated and transferred to him. There are namby-pamby animals among dogs as well as among bitches, and it is only waste of time to take any trouble with them, for they are useless for the breed.

Let us then regard these characteristics as they exhibit themselves in actual life. Both sexes work with flocks and herds without distinction, and there, as we saw in Chapter 2, only a hard and sharp dog can keep its end up, that is, one who knows how to go for the sheep precipitately, and to jump on them at sight. The shepherd may perhaps prefer a dog, because the bitch, stupid thing, will insist on having "urgent family affairs" of her own that demand her undivided attention twice in the year, and is therefore better in the yard; but the dog's service is far too exacting to give him much opportunity to indulge in any sexual aberrations, and he scarcely ever finds any outside attractions. It is different in the Police Service, but whether they use in this and similar services more dogs than bitches, or vice versa, there are no official statistics to inform us, so far as I know. Among the 16 Prize Tending Champions of the SV since 1901, 9 are dogs and 7 are bitches; while of the Field Tending Champions since 1906, 5 are dogs and 5 are bitches. Of the 880 dogs shown as entered for the Prize Tending, Service Dog, and Young Dog Tests, 518 were dogs and 362 were bitches; of these, 118 dogs and 116 bitches qualified as "excellent" in the Efficiency Examinations, and 100 dogs and 73 bitches passed as "very good". These numbers would seem to speak in favour of bitches, because, from a proportion of 59 dogs to 41 bitches, only 22.8 dogs as against 32.0 bitches gained "excellent", and 19.3 dogs obtained "very good" as compared with 20.2 bitches. In other words, from the animals thus tested, bitches have a larger number of premier rewards in proportion to their total numbers, and performed better service. This can naturally give no absolutely infallible and final information, both on account of the small numbers from which these statistics have compiled, and also from the fact that they were only taken for one year. They are, for all that, very instructive, and further facts in this respect should be obtained.

Graded and progressive. Training and Schooling must be given. The first exercises should be arranged progressively according to the natural capabilities and propensities of the dog, and then subsequently developed on the foundation already laid. Hegendorf expresses a most important truth when he writes "*Every service*

demanded of the dog, no matter what it is, presupposes a fundamental and paramount influence of the understanding. The means taken to secure the successful appeal to the understanding are found in dividing the work into separate, if component duties, which must be mastered progressively. One must begin with the easiest, while the more difficult can only be attempted when the dog has a thorough grasp of what is elementary.“

Confidence in the master must be the foundation; I have already described whence this originated, and how this is inherited and consolidated. On this firm foundation, on the love of the dog for his master, and on his habits of activity everything further can be developed, *for all exercise culminates in coming to the master and working with him.*

The aim of training and schooling is to subordinate the dog to our will, and to make of him a helper in accordance with our wishes, and a suitable assistant in our service. No training can be given without restraint, but the art of a good trainer consists in making this compulsion as imperceptible as possible, and, on the contrary, to allow the result of the training to appear as voluntary service. Compulsion, however, is not punishment, and when it must be resorted to to make the dog tractable, or to help him, the trainer must make the dog understand the difference by the tone of his voice and his countenance.

Schooling and Training differ not in quality, but in degree. The first is a preparation for the second. When we, in playing with the pup, (which gives us an opportunity to learn to know his character), seek to develop the schooling, this must never be regarded as a mere game. Playful Schooling or Training are contradictions in terms, and lead to no successful results. Schooling and Training must unite with each other, so that it cannot be said where one begins and the other ends. Both must preserve their spheres together, and proceed hand in hand, and then the dog cannot but remain useful as long as he lives.

Schooling influences can, as I said before, be already begun with the nestlings, though strictly speaking, they go back to the parents themselves, because their natural capabilities, whether inherited or acquired can be transmitted; and thus from servicable parents, we obtain young which are easily schooled and trained. *The first training of the pups should be, as we saw, to thoroughly instil good habits into them:* habits, that is, on which we can further build later on. By a progressive schooling in the months of puppyhood, and when the dog is young, and by a training which becomes gradually more serious and more positive, we obtain the foundations for the Education proper. The particular training for a special vocation, which, to be suitable, ought not to be begun before the end the first year, must *on no account whatever* be commenced before the tenth month. When the dog is still young, even when he is engaged in the agreeable pastime of sewing his inevitable “wild oats”, he ought to have set before him work that is real and serious, and to realise the duty of work, so

as to prevent him running to seed and acquiring really bad habits. Dogs who are not spoiled in this respect can commence their special training much later on, and yet a very satisfactory result will be obtained.

Before I go into the details of schooling and the exercises, there are a few points of general advice on which I should like to enlarge.

Firstly; Once a fault has been acquired in the performance of an exercise, or as the result of negligence in training, it is much more difficult to eradicate, and demands more attention and patience from the trainer than to insist on correct work and good behaviour right from the very beginning.

Secondly: To enforce the performance of an exercise is only right when the dog refuses "out of sheer cussedness", and there is no previous consideration of a fault in the training, or of an error in the giving of an order. Even in either of these events, the conscientious trainer will ask himself whether he will not attain his end more certainly by appearing to break off abruptly, and to change over to an exercise or an activity which the dog knows thoroughly well and does gladly, in order to calm him, and to have him well in hand once more, and then to exact again the performance of the exercise which was just before refused. It will then be generally done quite willingly and the dog can be praised.

Thirdly: It is better to pass over a fault which cannot be eradicated immediately with absolute certainty, than to give an order, the non-compliance with which will introduce the possibility of habitual disobedience. This is true especially of dogs who are running or walking off the leash. It is by far the best thing to wait till the dog comes back and then to correct the fault when the dog is held fast.

Fourthly: Nothing tires, and paralyses the mental powers so much as a constant reiteration of the same exercise. It is as "weary as a twice-told tale" or as "when Uncle sings the only song he knows". A task therefore must not be practised for too long, but must be interrupted with short pauses, the performance of other exercises, and by a run. This is especially true of the more difficult exercises; but for beginners all is difficult.

Fifthly: If a dog does not understand an exercise at once, a change of venue for the instruction, or a change of trainers sometimes literally works wonders. The regular trainer, in this latter event, must naturally not be present, for the pupil would otherwise always try to go to him. With dogs kept by amateurs, there is the difficulty that someone already known to the dog must be chosen as a substitute, otherwise he will only retire into his shell, if left to a total stranger. Whether a relation of the owner is suitable or not, must be decided by circumstances.

Finally: It must be a principal that every lesson must conclude with a petting to keep alive in the dog joy in his work. If a performance of an exercise does not exactly warrant this, the dog must be made to do a short exercise of which he has a thorough knowledge, after which he may have the petting he will have then deserved.

No schooling must take place after the chief meal in the day. The Romans already realised this when they said "Study is a weariness to a full belly". Food is only given after work is over, when it becomes, so to speak, a reward. It is indeed obvious that a dog which has just been fetched out of a room or kennel cannot be schooled off the leash; the pupil must have a preliminary run and so work off steam etc.

It does not matter very much where a dog is brought up and exercised. His education should be directed to enable him to cope with all the situations in life, and not only with those obtaining in the repose of a small room. For all that, the performance is not to be confined to one special place, except for this, that the most important exercises can only be performed in the open air. In the old days, it was considered absolutely necessary to have the preparatory work, called the "indoor training", in a room. Modern trainers have broken with this tradition and thoroughly practise all the exercises from A—Z in the open. This adds to the difficulties somewhat at the commencement, but it relieves both teacher and pupil from the monotony of a dreary school room, and makes it possible through working together; to utilise the force of example, and to take advantage of the spirit of ambition. The necessity for this originated the custom of working a large number of service dogs together in classes, and the experiment succeeded, and became a regularly accepted method. The trainer of a dog will generally have done this before, because he was not able to fit up a room as a school room, but at anyrate, he will already have chosen out such a place for himself at at the beginning at least, where there will not be too many counter-attractions.

I now come to consider the details which must be included in the schooling of the pup, and to the first principles of training. Under the head of "Schooling", I will confine myself to the following classification, behaviour towards the master, and his relations, servants strangers, domestic animals, house-, yard-, and street manners. In dealing with training, I will accompany the dog till he becomes a useful protecting and escorting dog for the amateur. Whoever wishes to go further into this matter, must procure one of the numerous publications on the education of the service dog *. It will be clear to the reader from this classification that the contents of the various headings cannot be confined strictly to their proper subject, but rather, that one must and will overlap the other, still, what has already been said need not be repeated. In the manner of dealing with the subject which I have already chosen, it is impossible to indicate the exact stages of the training, but the attentive reader will be able to find out for himself the correct sequence without difficulty. Further, he also knows from what has already been said that I neither wish, nor am I able to give any instructions that are capable of invariable application. All I can do is to offer certain advice according to which

* The German Shepherd dog as service dog by Rittmeister von Stephanitz and Police Lieut. Schoenherr, Principal of the Government Breeding and Training Institute at Grünheide, near Berlin. A new Edition of this work appeared in German, thoroughly revised, in 1921.

be may succeed in attaining his goal. Finally, he will realise for himself that, by his own work, he must have recourse to what was said above, and to something of what I mentioned in Chapter 2.

Just as trust in the master is the *sine qua non* for all schooling, so obedience is trust at its highest and best. This is the "be-all and the end-all" of our work. The dog's obedience testifies to the intelligence and ability of the trainer. A disobedient dog will be a burden to his owner and to his neighbours, but a thoroughly obedient dog can be left alone by his master in the most difficult circumstances. It must therefore be our aim throughout to accustom the dog to a perfect, joyful obedience, and to keep him in this by means of attentive guidance, and the right kind of work. "The training of men should not kill, but *strengthen character*" says Ludendorff, and that must be our guiding principle also in developing obedience in our dog.

Obedience must be something which is transferred to the dog, body and soul, through habituation. The recognition of this duty must be developed in the pupil on the foundation of his instinct for his master. He must realise that obedience will pay him, even as disobedience on the contrary will have unpleasant consequences. Except for the special work directed against man on the track, the aim of the entire schooling of the dog is directed towards the strengthening of this habit of obedience, without the elements of which, all schooling is absolutely impossible. The preliminary exercises, such as docility on the leash, following at heel, sitting, lying, crouching, creeping, lying down, bringing, and turning away from food, are therefore described as exercises in obedience.

Coming to the master is the visible sign of obedience, and by this we mean coming under all circumstances, even with a guilty conscience, and in all contingencies. This is trained into the pup by making him accustomed to hear his own name; later on this must be succeeded by "here", or "come here", but at first this must be used in conjunction with the pup's name. I have already explained how the habit of coming can be instilled into the pup or young dog by the example or the help of a reliable older dog.

It is not difficult to accustom a pup to his own name. This is done by frequently repeating the name in a loving tone while the master pets him. If the pup must first be called to his master for this purpose, the word of command "come here" is used as a preliminary exercise in coming, and this is accompanied by the offering of a crust of bread or something else as a means of enticement and reward of obedience. If he hangs back, the calling or the holding out of the bait must be repeated, and by apparent running away, the habit of coming to the master, and the inclination for catching and seizing can be aroused and utilised.

To turn this tendency to good account, it is recommended that this should be done in the open, when a young dog does not wish to hear. This means that the dog must be outwitted, in order to have him safe so that he cannot run away, which under these circumstances means that he must be put on the leash. Calling or running after him

would be without point. We must have the dog on the leash, and then, after he has first been praised for coming like a good dog, a certain amount of training in tractability on the leash can follow as an instruction and to thoroughly impress it on him, and not as a punishment. *The aim of the whole training is to make the dog willingly obedient, and so willingly obedient that he can do nothing else but obey.*

The leash is always to be used for practising coming to the master. It serves to guide the willing, and constrains the obstinate, and in cases of necessity, with the help of the spiked collar, it points out the fact that finally there is nothing else to be done but to obey the will of the master, and that such obedience is also an advantage to the pupil. Indeed the dog must first be broken in to the leash and be made amenable to it before it can be used as a further means of training. I will say further on how this preliminary condition is to be fulfilled.

The dog on the leash must sit down in front of the trainer — of this also more will be said anon — the trainer then, with the leash held slack in the left hand, steps back somewhat and calls "come here". At the same time he pulls the leash. When the dog gets up and comes, he must be praised. When he has come, he must be allowed a short run, and then the exercise must be repeated. If the dog stands up to come, before the word of command, "come here" is given, he must again be made to sit down by the command "sit down", for which an explanation of the necessary means of securing this when required will be given later on. If he grasps the exercise, the long leash must be used instead of the short, and the distance from which the dog must come must be gradually increased. This must be practised till the pup can always be relied on to come quickly to the trainer in all circumstances, and from any place. The dog must then be taught to come from lying down, from his home, from his kennel, from his feeding dish, or even when occupied with one of the trainer's family. This must always be repeated with special strictness when obedience in any particular direction begins to flag. The long leash is only dispensed with when the habit of coming appears to be thoroughly instilled into the pup. At a later period, signs or a whistle can be used instead of words of command.

The right relation between the pup and his master depends absolutely upon correct training. Every carelessness in dealing with undesirable characteristics, anything which is aroused even in play, takes its revenge later on. Boisterousness, heedlessness, a tendency to rebel, over-readiness to bite are the results of such sins of criminal complacency, or of wicked teasing. It is to avoid this, that I uttered my warning against allowing pups to play with children too frequently. The young dog must be made to realise early on that he must subordinate himself to the wishes of his master, for this also has a great deal to do with the question of obedience. If the dog is boisterous at an undesirable time, if he wishes to have not only a simple petting, but proceeds "to take an ell where allowed an inch", he must be remorselessly sat upon and put in his place, — about

the habituation to this, I will say more later,—then he must be tied up, and only loosed when his master really has time and a desire for his society. I must, however, emphasise this that a certain amount of self-sacrifice *must* be made for the sake of the dog, but this is more than compensated for later on. Let it also be said here that the dog must be trained to allow a thorough examination to be made of the various parts of his body; he must quietly allow himself to be felt all over, lie on his back, and permit his mouth to be opened. This is most easily secured by playing with him.

A very trying habit is when the dog jumps up in joyful greeting. It is indeed a sign of joy, and whatever would be the annoyance felt at a suit made dirty by this token of affection, to give the dog a good thrashing would be not only wrong treatment but positive ill-treatment. Still, on account of the dire consequences — especially in the case of a lady's thin dress — the inclination to do this must most certainly be eradicated. Whoever allows the dog to jump up at one time for whatever reason, but punishes him another time is obviously treating him quite wrongly. Instead of jumping up, the dog must be trained to greet his master by sitting down in front of him and giving his paw. All attempts to jump up must be resisted by "down", and if the dog is especially persistent, by an "accidently on purpose" treading on his hind toes".

Licking is another most unpleasant habit. This is also a sign of love, and indeed it is the highest proof of love the dog can give — mother love — but because he seeks out all kinds of places with his tongue and not only the hand of his master, and often enough roots about in filth and takes out anything he wants, with a delightful impartiality, this sign of love is not only undesirable to the majority of people, but it even appears, (and quite rightly) to be positively unhealthy. Strangely enough, all people do not think so; some even go so far as to demand this licking from the dog, and allow not only the hand but even the face to be thoroughly licked. However, Everyone to his own taste, unanimity always means monotony, and if we all thought alike, how many of us would be married? All dogs, however, do not show this inclination, but where it is shown, it must be immediately withheld. If a plain simple "hah" is not sufficient, it must be succeeded by a light smack on the mouth, or a quick seizing of the mouth so that the outstretched tongue can be gently held, and a little pepper or something bitter, but harmless, sprinkled on it.

What holds true of intercourse with the master, also holds true of intercourse with his relations, children and servants. Children love to tease, and servants spoil dogs only too easily, because they have no regard for the particular and superior prudence of our principles of training, and then our labour is all in vain. It is naturally a very hard thing for a pupil to grasp that he can do one thing with one person, and with another he can do or leave undone what he likes, and over-watchfulness even as brutality spoils him. Dogs, and especially young dogs that require training, are therefore to be kept away from the servants

as much as possible and, above all, they must never be allowed to go on the street with them, off the leash. In this respect the dog anticipates our wishes, for he has the instinct for his master, and wishes generally, as we saw, when properly treated, to have very little to do with the servants and can, if well trained, take their place to some extent.

Towards strangers, the dog should be watchful and reserved, both in the house and on the street. He should neither seek their friendship, nor too insistently sniff at them, bark at them, and attack their legs, for that would be a sign of bad upbringing. With friends of the family he may, and naturally will, show himself friendly; but even here reserve is better, and much more shepherd-dog-like than gushing. Where this proper behaviour is lacking, it is generally the result of bad upbringing. Perhaps as a pup, the dog was kept in a kennel, and acquired the habit of greeting all and sundry who would take the trouble to relieve the deadly dulness of the soul-destroying monotony of his poor, poor little existence. Thus he became a friend of strangers, instead of true to his master, just like our ignorant "Masses" who wax eloquent over "World Brotherhood", and prefer it to loving their Native Land and their Home. Perhaps too, this is the result of an owner without understanding, who allowed the growing dog to be petted and pampered by friends who were equally intelligent. This is the way par excellence, to breed flabby dogs with cosmopolitan sympathies, "conscientious objectors", and pacifists, but it never

has, and never will, produce a shepherd dog. The owner of a shepherd dog, who wishes to have a well behaved dog, will ask his friends to take no notice of an inquisitive youngster, never to entice him, never to give him anything, but rather to rebuff him and if nothing else will effect this, to do it in the sharpest possible way with a smack or a push, which is the best warning for the future. If the dog is too sharp, or to prone to bite, on the contrary, he must be guarded against in the manner which I will mention further on.

To treat a shy dog correctly, and to bring him up to be otherwise is uncommonly difficult, and demands great patience and cleverness on the part of the trainer. On the other hand, it is only waste of time to trouble about an overbred kennel-shy "bag of nerves"; get rid of



Fig. 398. The new Pageboy.

him at once and without further ado. If, however, it is only a question of anxiety with respect to what is new and unaccustomed, quiet, habituation, and the winning of his confidence, will help (and in certain circumstances, by allowing him to smell) but everything must be done with firmness, or all will be ruined. In the case of a beaten, hand-shy dog, there must always be a change of trainers, if the animal is ever to be of any use at all. A complete change must first be made in the training, the dog must have as much opportunity as possible for going with his new master, — who must also feed and look after him personally, — so that he may forget his earlier ill-treatment, and plant a new trust for his master in his heart.

An older dog will regard and treat the other domestic animals in the farmyard as the property of his master; a growing dog, on the other hand, will, until he has learnt wisdom, attempt some mischief against them. The hen especially seems to exercise some fatal attraction, for by its cackling, its impudent forwardness, its foolishness, its

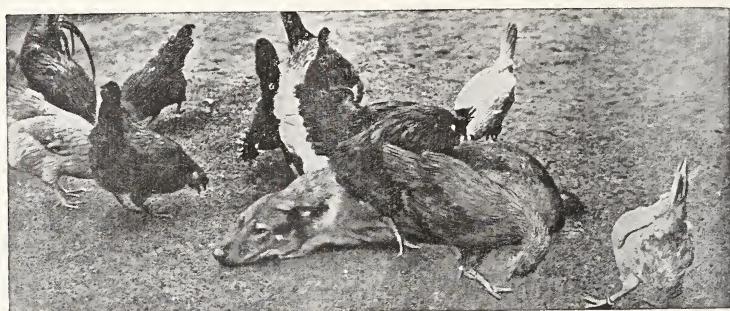


Fig. 399. "Only silly Hens".

brainless and continuous running and fluttering, it simply asks to be hunted. The duck behaves itself more discreetly, but a hissing goose with its vigorous beating of wings can exasperate even an old dog into an attitude of watchful opposition. If the opportunity occurs, it is a very good schooling to bring a young dog, naturally on the leash, to a hen with chickens. If the pupil wishes to fall on the scuttling brood, give a sharp jerk on the leash and say "hah", and allow the hen to peck him. If such teaching does not help in the long run, the dog must be thoroughly broken in with the studded collar, and be made to crouch and lie down before poultry. If a dog has been caught poaching, in the very act, it helps to throw something at him, or to use the catapult. If the murderer has already been committed, he must be made to crouch, and to do a penitential crawl in front of his victim. Such an inveterate poacher can often be punished by being admonished "hah", and being hit on the mouth with the "corpus delicti". It does not follow that a dog, which can be trusted with poultry in his own farmyard, is equally reliable on the street, or will

remain so after a change of owners; in that case therefore constant care, attention, and timely action must be taken.

What is true of poultry, is also true of rabbits and similar small fry. Growing dogs usually remain harmless towards cats, for pussy can very well defend herself with claws and paws. If a dog develops into a cat hunter later on, that is generally the result of a faulty bringing up, which incited the dog instead of restraining him. If the master himself has not done this, there are always plenty of fools to whom it affords amusement and "sport" to arouse the inclination in the dog to attack all that runs and flies, through a senseless inciting and provocation, instead of a timely opposition. Such an artificially made ruffler is only rendered peaceable with great difficulty; and how this is to be done I will describe later on.

Great care must be taken in adjusting the relations of one dog with another. By reason of his inner, most *primaevale* instincts, the dog is attracted to those of his own kind; he is always ready to see something new, and even more naturally, he wishes to smell, to learn something worth knowing, make acquaintances, to play and also to romp. But already, on account of inflection, we must not allow a young dog to consort too often with strange dogs. If indeed we prevent this altogether, or only permit it in a timorous kind of way, we shall bring up a "cowardly custard", (as the children say), who will seek safety between the legs of his master every time he sees a strange dog. Just as with children, so here too, it is good for a dog to have young friends, and then to let them "rub off the edges" against each other, as part of their self-education. As regards behaviour in the street, the dog must be gradually brought so that he will allow himself to be called off even when he wishes to run after his "pals". If, however, he is already standing eye to eye with one, this whistling off can lead to hard struggles in his soul. If a dog obeys the call, he appears to yield to the other dog, and to give rein to his weaker side; he is then too easily disposed of, and we encourage in him the very thing we wish to avoid. At such times, it is right to allow the mutual greeting and examination to take place and only to call off the dog when further interest begins to wane on both sides, or they begin to play. To go on quietly without further ado awakes in the dog the habit of keeping an eye on his master. When such a meeting proceeds to resolve itself into a brawl, as a rule, it is nothing



Fig. 400. "Pussy-cat Mouser, where have you been?".

very serious, if it is not an *affaire de cœur*; it is often only a sham fight, though an unlucky nip can easily develop into a “duel with buttons off”. It is difficult to meet out impartial justice in a brawl, for not infrequently, the lover of peace incurs the penalty. To beat the one, only redoubles the fury of the other, who believes that he has found an ally. If one does succeed in separating the two brawlers, by seizing them by the collar and keeping them apart, the stranger must be allowed to run off and one's own dog held back and pacified. If, however, two real biters have started a regular “stack up”, — and generally in this case it is a pair of jealous females, — the best method of restoring peace is to throw a bucket of water over the heads of the squabblers.

The best protection against a biting dog is to remain upright and calm, controlling the dog with the eye. Fearlessness and the human eye are always the best means of mastering any animal. If it is possible to secure protection for the back, an attempt must be made to achieve this by retreating slowly backwards, but the dog must never be allowed to escape from the eye. If one stoops to pick up stones or anything, this throwing will only excite the dog, already willing enough to attack. If he does attack, a stick must be held in front of him, on which he can fasten his teeth, while a short sharp blow with the clenched fist along side of the stick, on the tip of the nose, settles the strongest. To squat down in front of a dog, and to perform all kinds of tricks in this position in order to astonish him, then to pull his tail, and then to bring him to run are old country tricks, but I doubt very much whether they are really successful, they may be all very well for barkers, but they are quite useless against biters.

In training for the house, cleanliness is the principle consideration. As a means to secure this, we can utilise the natural tendencies of the dog, habituation, and — the punctuality and orderliness of the master, yes indeed of the *master*. The sucking pup drops no dung, the mother looks after this. As soon as the pup can crawl, he takes the trouble to relieve himself outside the nest. We must use this habit as a foundation and enlarge the pup's idea of the nest, when he is taken into the house, and accustom him from the very beginning to attend to his needs outside, and in one special place. To secure this, we must observe punctuality in his meals, and regularly take him out at the right time to relieve himself. Whoever does not wish to do this, but prefers the congenial task of swabbing up after him must not be astonished if his little pig gradually grows up into an inveterate swine, who regards a room of all places in the world as his fit and proper sty. If the pup feels the necessity for relieving himself, he will willingly hunt out a dark corner, and then it is high time to catch up the little fellow and take him out of the house, praise him, and bring him to his proper place. When the pup has acquired the habit of being taken out of the house, he generally announces his needs at the door, and like older dogs, will do the same by a restless running to and fro, and remaining there in between times, by yowling, and also by looking intently at his master, or by scratch-

ching at the door. Such intimations that "I must leave the room" are always to be praised; and when he has settled his affairs, he must be brought in once more. In a few days, or weeks, at the most, of such careful attention the little fellow will be "clean". Stomach troubles and illnesses can naturally lead to accidents. In such cases, there is no rule, but has its exception, and "Necessity knows no Law". A sick dog, above all, should not be in room, at least in a well furnished room, for nursing involves special precautions. If a dog that is healthy transgresses the law of cleanliness, it is quite wrong to push his nose into his misdeed, that is only a torture to him, and such a training for cleanliness would furnish one of the very first reasons for hand shyness, and would make the dog, next time, creep into a corner where the fact of such a misdeed would only be discovered when it shrieked aloud to the very skies. If it is possible to catch an offender in the very act, while he is about to squat or is obviously thinking about it, a light slap will do no harm, it is but even handed justice. Sometimes indeed it is also injustice, for from inattention and laziness this has happened to dogs both young and old, because many a fine fellow has overtaxed his strength, by waiting too long from motives of cleanliness, which process became ever more painful, and laid up for himself the cause of later sorrows.

Cleanliness and order in a room are generally not confined to a refusal to satisfy the natural needs. The dog, who has become early accustomed not to come into the house or room before his muddy feet have been wiped with a special cloth, will never bring mud into a room. In the same way, the dog who is thoroughly accustomed to his own particular place in a room, to whom the meaning of the upholstered chair or bed has become known, because it is forbidden to lie on them, will never leave behind troublesome souvenirs in the form of stray tufts of hair. Whoever finds it too much trouble to insist on such order must indeed not grumble about dirty foot marks or the inevitable presence of hair.

This just mentioned lolling around on furniture and beds is not to be tolerated. Generally, the bad habit of the master or of his wife of enticing the dog there to play is responsible for this. What was allowed to Johnnie, however, cannot be allowed to John, or should not be allowed, but it is hard, very hard to break off old habits. Dogs usually seek the forbidden place only in the absence of their master, and indeed the strong scent of the master there can lead them to seek out the forbidden place, as I have already said in Chapter 2. There is no other alternative than to work by means of a surprise in order to administer the usual caution, instruction or punishment. When a dog indeed condescends to make himself, at home, as my oft-mentioned old Mira, who when I sat at my desk, gingerly and stealthily before my eyes, looking at me sharply the whole time installed herself on the sofa where she made herself comfortable; but still continued to gaze at me, and when she caught my eye, smiled at me knowingly and happily, or rather wagged her tail, she then also "knocked", — not like Rolf et *hoc genus*

omne-with clumsy paw — but with her tail. In her case, however, it was not letters nor numbers, nor laboriously expressed words but thoughts, from brain to brain and heart to heart, then above all one cannot bring such a dear rascal to book in a heartless way, either to hunt her down, or to punish her. Then indeed one will prefer to offer one's purse, and all the wisdom of training upon the altar of love for the dog, and joy in the animal.

Anyone can look after the dog's cleanliness in feeding who feeds him in a room. Not that the dog must make no gravy splashes by the side of the plate, for he will already lick these up afterwards, but the dish must not be placed on your very best Turkey carpet without any further ado, not even if you are a post-war profiteer with the bank balance of a Croesus. Whoever gives large junks of meat or bones with soft food cannot prevent the dog from fishing them out, and taking them away to a comfortable place where he can tear, bite, chew, and gnaw them in peace and quiet to his heart's content. This must be done when he lies down, that is the dog's custom, against which we can do nothing, because the paws are used to help in this. Such pieces should not be given with the food at all, but afterwards, and better not in the room. On the contrary, care can be taken that the dog remains by his dish, and whoever runs away and discontinues to eat must have his food taken away. This, if done habitually, is a very good training. Such remaining by the dish is absolutely necessary when several dogs are fed at the same time. To pay a visit to one's neighbour to see what he has, and even to nibble a little must not be allowed, even with pups, and then they will always mind their table manners when they are older. A dog by himself can be easily trained on a word of command, such as "eat", to begin eating. This can, in certain circumstances, keep the dog from picking and stealing, but even he knows the Russian proverb "Russia is broad, and the Czar is far (!) away".

I have already spoken in this Chapter of a special lying place for the dog. It is absolutely necessary to accustom a dog to one particular place and no other, and care should be taken not only that he does not lounge round everywhere and anywhere, causing damage, bringing in dirt, lying in the way, and making people trip over him, but also that there shall be a place, recognised as belonging to him, to which he can be sent when he has made himself an absolute emporium for all the sweet (?) "odours of Araby", or when his master prefers his room to his company. In order to facilitate the habituating of the dog to one place, we prepare for him his own particular spot. For younger animals, this can be a small sleeping box, a basket, an easily cleaned, stout piece of matting, or an old strip of carpet, but for pups it must be thoroughly strong so that the bed shall not be quickly nibbled and torn to pieces. The place must be so chosen that the dog can be easily seen there; on the other hand, he will all the sooner feel himself at home when the choice is made with some regard to his wishes in the matter. A dog likes his place to be in the dark and under cover; he does not like his unprotected parts, such as his back and

flanks to be open to attack, which is a relic of the caution of his wild dog ancestors. Further, it must not be draughty, but on the contrary as warm as may be. A much appreciated place is under the desk; a real dog seeks out this hollow place at once and always afterwards, for, in addition, it has the scent of his master in a very intensified way. This place, however, is not at all suitable as a permanent home for the dog; firstly because the master uses the place himself, and secondly, because the dog is not sufficiently under observation. With a little thought and perhaps by re-arranging the furniture, a place can be found in any room which will be suitable for the dog in every way, and which he will gladly adopt as his own. We facilitate his habituation there by choosing the time when he will gladly go there without any further ado, i. e. the time when he digests his food after his meal.

The dog is then laid on the chosen place, and gently pushed down on to it, while repeating the command "place". Press on the end of the withers, not behind, nor on the back, and if necessary take the forelegs and push them forward carefully. If the dog remains quietly in the place, with this help, he must be praised, the hands can be gradually taken away, and the trainer can then stand up. If the dog wishes to rise, the whole process must be repeated till he remains lying before his master for some time. Naturally, as soon as his master goes, he will wish to jump up and run off, he (and pups too,) must therefore be fastened once more to their place, by a chain, but *never by the leash*. The pupil, by this exercise learns three things, to become accustomed to his place, to lie down there — for which later on the word of command "place" is used with which "lie down" or "lie" can be used as well — and lastly, he learns how to lie on something. We choose a chain for this so that the dog shall not cultivate the habit of nibbling at the tasty leash, he would only learn from this how to bite it through and free himself on his own initiative, (which, however must not happen for a dog who is placed to lie down,) while he will soon leave off biting round the cold chain. The pupil will at first rebel against the constraint of the chain, that does not matter, he will soon become accustomed to it, but it is good from the very first to fasten him so short on the chain that he is obliged to remain in his appointed place, for he must also learn later on to seek it out willingly when "place" is said, and to remain there till he is called away. This word "place" must mean the bed itself, for the place of the bed can then also be changed.

The habituating of a dog to a certain particular place where he causes no trouble is on this account of all the greater importance, because some dogs have a knack of lying down in the very place above all others most calculated to disturb the coming and going in the house. If they are not rooted out and sent to their own place, they will gradually come to expect the dear members of the family to step round them. Unfortunately so many people do this from a mistaken sense of kindness, and thereby only strengthen the boorishness and the laziness of the dog, which in the dark, when he cannot be seen, can

lead to very serious accidents. No consideration whatever must be shown to a loafing dog and when an "accidently on purpose" step is made on a tender spot, this is only a means of educating him, and serves to promote the welfare of the dog in particular, and the community in general.

Boredom and the habit of gnawing easily lead the young dog to nibbling and tearing all the articles within reach, and even older dogs at times cannot resist the attractions of such a pastime. We already see grown-up children going round with a bag of sweets, and in America, the citizens of "God's Own Country" chew—gum! The wooden parts of the furniture, curtains, carpets, and all leather articles are specially preferred. Shoes exercise an irresistible attraction, and in addition, they carry the beloved scent of the master. Here great attention must be paid, and ample precautions taken to avoid serious damage. To give the pup something to do and to satisfy the craving for gnawing in the teething time, soft bones, or balls of hard wood and hard indiarubber balls are to be given, but never pieces of soft wood, or soft balls. I have already uttered a warning against sponges and stones. Places which are specially liable to rouse the gnawing craze can be protected by being sprinkled or damped with some sharp smelling stuff; such as snuff, ground pepper, liquid ammonia and turpentine; aloes are also excellent because of their bitter taste, where they, in spite of their dark colour, can be used. But indeed all these means have only a temporary value, and there must be no relaxation of watchfulness. As soon as the pup begins to gnaw, he must be warned with "hah"; if he takes no notice, he must be given a slight smack and put in his place. A young dog must never be allowed to remain in a room alone containing valuable things, if his master leaves the room, the pup must also go or be tied up.

Begging and stealing are very objectionable vices. The begging dog is the result of deficient or a wrong up-bringing. Begging can only too easily degenerate into stealing. A dog must not eat at table, but only in his own place. Tie him there till he remains there obediently; if he yowls, rebuke him into quietness with "hah". The dog must not even beg with his eyes; he must never know that a piece will be thrown to him from the table, or that he will be called to fetch one. I need not say once more that the remains of the meal are not to be given to him on a plate, when the meal is over; on the contrary, if it is also his meal time, let him have his own proper food.

A dog learns the habit of begging, picking and stealing only too easily in the kitchen, and on this account, the kitchen, except in special circumstances, should be "out of bounds" to him. Servants cannot be too often warned and even watched in this respect. As soon as the dog pokes his nose in at the kitchen door, he must hear "hah", or "get out", while there is always something handy which can be thrown at him or even poured over him, naturally not boiling water.

"Opportunity makes the thief", therefore the dog must be kept away from the kitchen, dining and store rooms. He must not

be given unnecessary fightings and spiritual combats by being left alone at the side of a table laid for a meal. I had at first in those merry days when I was a Lieutenant, "without a single care", a bitch who was "a perfect lady", who never thought of begging and stealing, but was fed generously, and far too lavishly at that. One day my "batman" left her Ladyship as usual by the breakfast table, which was laid, to lead away my horse. When I came in, the table was cleared; Miss Incorruptible had yielded this time, and had given in to what was indeed an overwhelming craving.

If the dog has acquired the habit of nibbling and stealing, it is very difficult to break him of it. Therefore it is most useful, along with the precautions dictated by opportunities as they arrive, to have a preliminary course of education in the "Morallities", and not to wait till the dog gives in to a perfectly natural desire. A *bonne bouche*, large enough, but not sufficiently small to be swallowed at one gulp, is laid, well within view and accessible, on a chair or on the corner of the table. The dog, held short on the leash, is then brought near the dainty, if he snuffles at it, or wishes to seize it, he must be checked by a stern "hah" and a warning jerk of the leash. After this has been repeated several times, he is to be set free, the trainer apparently leaves him to his own devices, but nevertheless keeps his eye on his pupil. If he succumbs to the temptation, he must at once be firmly seized, and here is just *the opportunity* where a reasonable thrashing will be most beneficial. Later on, the dog is to be left alone with the dainty, but watched by the trainer from a room near by. All kinds of ingenious "booby traps" can be used to break him of the habit of stealing; electric shocks, protruding spikes etc., but the best education is watchfulness. To wish to make a dainty loathsome to a dog by means of sharp smelling, or bitter, tasting stuff, takes no account of the dog's nose, which would say to the pilferer at the right time "tastes nasty, not for us". The precept only holds good for the particular dainty in question, and not for others. A dog, who has been caught in the very act, can be held fast, and made to lie down before what he stole as a punishment, he must also be made to creep round that which has been taken from him, and finally, in no case must he be allowed to eat, so far as he knows, that which in other circumstances is strictly forbidden.

The door, whether the front door, or the door of a room, offers ample opportunity for training and is the cause of no little vexation, on account of the dog. The dog, who when set free, wishes to storm out, and to be first, and forces himself even through the legs of his master, but he is no sooner out than he wishes to come in again, scratches the door, makes the paint and the lock dirty, obtains his heart's desire, opens the door, and naturally leaves it wide open. The instinct for the open, the joy over exercise awaiting him there is too natural and therefore the meaning of "don't push" and a quiet behaviour in front of the door must be instilled into him already early on; he must be made to learn to think "first comes master then I". This can already be made clear, even to a tiny pup, with a little attention; later on,

the dog must sit before the door, and wait till it is wide open, and must only come out when told "come to heel" or "go on".

If the dog is not to be taken out, he must be sent to his place before his master goes out of the room. This will require frequent repetition and constant attention.

Dogs very easily learn how to open a door, either as the result of their own experience, or from observing the example of other dogs or people. No one should teach this to a dog, it is a most unacceptable accomplishment, which is neither useful, nor gives any satisfaction. They always forget to shut the door again with the regularity of little children in similar circumstances. I, at least, have never been able to hear of a dog who shut the door after him, or who had been taught to do it. As soon as the dog commences a course of self-instruction in door opening, he must be severely warned, and later on punished. If, however, he has previously acquired this accomplishment, we can scarcely ever hope to und the mischief.

In the yard, the dog must be habituated to chain, and kennel. The word "place" helps us in regard to the kennel, for the dog has already learnt to associate this with lying down, but care must be taken here that he does not "improve the shining hours" by "vocal exercises" or continual barking. He can be sent to his place, i. e. into the kennel, when necessary, by an admonition delivered from the window in the shape of a pellet from a catapult, or a friendly hint from a water jug. This has a much more potent effect than coming out and giving him a "pi jaw", threatening him with the whip, or even a beating. The dog is pleased when his master comes to him, and all yowling and barking stop without any further ado. He would also fail to understand the reason for the lecture or the punishment, and, on the contrary, would punctually time the recommencement of the "shindy" with the disappearance of his master. The same is true for temporary chaining to a kennel, but in this case, care *must* be taken that the dog has opportunity for play and intercourse.

I have already spoken of the habituation of the dog to the small animals in the house and the yard. When the dog is on a farm, an opportunity must be given him for getting to know the larger domestic animals, horses, cattle, pigs, goats, and sheep. Means of training here come of themselves, but with regard to horses, the dog, from the very first, must be prevented from barking, jumping up at them or seizing their legs.

If a dog is left alone in a garden, he can naturally cause much damage through grubbing and digging after mice, moles, and burrowing rats. The amateur must therefore decide which he prefers, a fresh happy, natural dog, or a painfully well-kept artificial garden. In kitchen gardens, when kept off the plots, from the beginning, the dog is easily trained to keep to the paths, for keeping to the furrow is already in the blood of the shepherd dog.

Education for the street demands, first of all, tractability on the leash. We call a dog "tractable" who, without any dragging or hanging back, walks close to the left knee of his leader. This naturally cannot

yet be expected of a pup, but indeed, with these especially, we must not go out on the street without taking them on the leash. The pup has already learnt the constraining force of the chain indoors when being accustomed to his place, and for this purpose the first collar must be fastened round his neck. Naturally for this we do not immediately avail ourselves of a leather collar, but a small, simple, light collar which buckles, which can be home made, but must have no "tinkle bell". The little one quickly becomes used to this collar, but the constraint of the leash vexes him very much more. We must help him by enticing him, and running forward, — so that he will scramble after us — by showing him a tasty morsel, from which he will have a bite now and then to encourage him. Gradually he comes to realise that the leash is not such a terrible thing after all, if he only follows as he ought, and that he only feels it when he wishes to do something different from master who always so kindly invites him to come with him. The first walks on the leash are taken in the yard, or in the garden, less for the sake of the pup than from the consideration that other people also have a right to be on the street, and are not to be hindered. When this goes pretty well, the leash can be made shorter, and the pupil can then be taken out on the street. I have already described above in detail what means can be used to help to habituate the dog to the leash, and what mistakes are often made in this direction.

The more the dog has been habituated to the leash, or the bigger and the older he is, the shorter the leash can be held, and the more nearly the results can and must correspond to what is expected. The natural gait of the dog, as we saw in Chapter 5, is a short uneven trot, which, however, is more progressive than the slow walk of a man. The trainer can therefore help if he makes his own gait quick for if he steps short, he falls into a lazy gait, and makes it more difficult for the dog to follow correctly, and he thus encourages pressing forward and straining on the leash. Dogs led on the street are generally anything but happy, because leaders do not know how to lead, or because it bores them too excessively to look after them; while even at Exhibitions one can see similar sights often enough. The shorter the leash is held, the easier it is to lead the dog, and the greater the control of the leader over him. Generally, however, the dog lounges along, half a mile or so behind, or from the side of "dear master" or "darling mistress", blocking the footpath, stumbling over their legs, and getting mixed up with other leashes and lamp posts. Or else the dog takes the loose end of the leash in his mouth in play and dances a sort of "Shimmy shake" by the side of the leader, who perhaps is rather proud than otherwise of the impression thus created, and is blissfully unconscious of the fact that the dog is thus entirely out of hand, and that the whole end of leading is accordingly stultified. These are the sins of leading of which the dog takes full advantage, from the consequences of which he will only be broken with difficulty. Let us therefore make provision for the time when absolute obedience is required, by paying strict attention to the leash.

A dog off the leash must not come on the street before he is so perfectly obedient that he can be depended upon to come when called, and will allow himself to be fastened on the leash. I am speaking here of town dogs, and of streets with heavy traffic. For the more fortunate country dog, there is the yard, far from the streets, and he does not go in peril of life and limb, except perhaps for a motor car passing through "at only 18 miles an hour" (?).

The free running dog also must keep close to his master on the street and should follow "at heel". Districts without much traffic must be used for working off steam, and the dog must certainly run free. Of the way in which the free running dog should behave himself on the street, whether he should keep close to his master, or not, or whether, on the contrary, he should look out more for his own kind etc. can only be decided by how the dog is kept, what kind of an education he had, and what attention and love, (not dithering dotage) his master has for him. The proper word of command to make the dog follow correctly is "heel"; if he does not take sufficient notice of this, he must be called and fastened on the leash, and this must be succeeded by diligent work on the leash, interspersed with free runs, if possible in the open country. When told "forward", the dog may go ahead at his own sweet will.

If the free running dog has acquired the habit of paying calls in strange houses or farm yards, or if he yields to the inborn desire of the dog to chase everything that moves, when he meets cyclists, riders, cars, and trams, he must always be taken on the leash for a course of instruction in manners, even as when he is somewhat too boisterous with other people on the street. If he makes himself too agreeable to strangers, and allows himself to be petted by them, the most efficient remedy is to allow him to be enticed by a reliable confederate, put him on the leash, lead him into a quiet corner and give him a thorough good "tanning", and then when he is once more free, he will remark that from strangers he can expect nothing but trouble, and from his master, on the other hand, nothing but what is good.

If the dog is absolutely obedient and can be relied on to follow when off the leash, he can gradually be trained to follow behind a bicycle, horse, or carriage, but no special hints can be given how to regulate this while he is actually doing so.

The dog as a rule ought *not* to be taken into Hotels, Restaurants, Public Houses etc., but when it is permitted, he must above all things give no trouble. He must not loaf round in the way, but should at once be told "place", that means to lie under the bench or chair occupied by his master. He must stay there quietly, and should never be allowed to go and beg from strangers. Here too the attention and suitable precaution of the master are the chief considerations for giving the dog thorough good education. The same is true of shops; if the dog is allowed to go in, he must always be on the leash, but generally he must wait outside, and for this should at least have learnt the meaning of "wait" and "lie down", and not try to push his way in with a later customer. He must also be prevented from

sniffing at displayed wares — which are to be found at many shop entrances — especially when they are eatables. Dogs also often wish to cock up their legs, and leave their scent as a sign of their ownership when the smell of the wares meets with their approval, or otherwise as a sign of contempt.

Care must also be taken that all the remains of a meal lying round are picked up. The dog seeks everywhere, out of sheer, natural instinct, for all the prized chance pieces which — less frequently in the town, but in the open country as poisoned bait — can injure him very seriously. Even a thoroughly well fed dog will not disdain such finds, if he is not trained to do so from the very first, and even then — —. If the dog begins to busy himself with such stuff, he must be warned off with "hah", called to "heel", and put on the leash, and, if possible, be further and suitably trained in this respect, made to lie down, crouch and crawl.

Before I leave the question of street training, just one more most urgent reminder for all dog keepers. *A dog can and must be trained to be clean on the street*, so that he relieves himself on the road and not on the pavement. Dog souvenirs, left there to be trodden upon, awaken in the eyes, nose and stomach of the passer-by a most unpleasant feeling, it is therefore obvious that such incidents only feed the animus of dog haters, and give further occasion to "the lewd fellows of the baser sort". Here too it is a case of "the old do what they learnt when young", that is, the young dog, from the very first is to be accustomed to relieve himself on the road and not on the pavement, and must be sent off the pavement with "hah". This indeed is not so easy in the traffic of a large town, for there the pavement is more than crowded. The owner of a dog must seek out a quiet corner with his charge, for the dog too likes privacy and calm for this operation. If he wishes to find a suitable place in the courtyard of a house, the owner must know how to make friends with the concierge, or the porter. The smelling of the dog-letter box, and the habit of adding a personal contribution to the daily mail is a deeply rooted canine instinct. Even we, men that we are, look round during a promenade and survey with satisfaction a pleasing sight, and therefrom even the most spiteful and acidulated "Mrs Caudle" cannot drag away the mildest and most obedient of husbands. It is just the same with this custom of the dog; on the leash it is naturally not to be allowed, but the free running dog cannot be broken of the habit. Whoever is against this, let him procure a bitch which at least will not stand against a milliner's shop, then indeed he will have "no more objections".

If our walk with the dog at last leads us to the open country, he must have a really good run. It will afford the greatest possible pleasure to him, if his master will occupy himself with him at this time, play with him, run with him and make him jump, fetch, and play "Hide and Seek". "Hide and Seek" is especially useful, because it teaches the dog to use his nose when he needs it most, and has lost his master in the street. He must then try to find him for

himself from a new track, or, if the worst comes to the worst, he must find his way home again by means of his track, for which his wonderful sense of smell helps him.

Playing in the open can also serve to take away from the young dog the dangerous craze for hunting. The foundation for this can have been given by a senseless setting him on to everything alive. The "Shikar" instinct itself is a primaeval inheritance which is more or less in every dog, but it can be suppressed by proper training. We observe the dog when free to see whether he takes up or follows any tracks of game that he encounters. If he does, he is at once to be warned by "hah", and called to heel. Some young dogs point out correctly the scent of game, others show an inclination for this, but the majority track it out with the keenest interest, and the further they go, the keener they are. Then it is high time to cope with the situation, or the pupil will soon become entirely out of hand. If, however, the hunt has been taken up behind a hare that has been roused from a furrow, calling and whistling will be labour in vain, and the leader must wait till the dog returns tired out. He must not at first blame nor punish him, but put him on the leash, and go with him to the place where the hunt began, and there exercise him thoroughly with the studded collar, crouching and creeping, and say "hah hare". Hegendorf recommends for this his collar which I have already mentioned. The corpse of the hare must be used to hit the sinner smartly on the nose and mouth, or the whip can be resorted to, or, in case of urgent need, a light twig quickly improvised, and in this case justice must not be over adulterated with mercy, so that the dog may have all desire for hunting trained out of him. The dog who has once become a very Nimrod cannot really be turned from his evil ways, and except in the case of the Security Service in the towns, he must no longer be employed in his proper vocation. Such a hunter can no longer be used with the flocks and herds, not even as a watch dog in the country, on account of his unreliability. He must be continually on the chain, or shut in, and yet he will always find an opportunity for indulging his passion; he will leave the house and yard to look after of themselves; he takes the avenging cudgel of an outraged Justice cheerfully and cunningly in his mouth when it falls — and hunts with greater zest than ever.

With this, I conclude my remarks about general schooling. I come now to the particular training, which, as I have already often remarked, must go hand in hand with the schooling, and which, in order to be dealt with exhaustively must, as in what has gone before in the matter of obedience, be divided up into several questions.

In speaking of the training of the protection and escorting dog — I will not go further at present — I will adhere to the following divisions, exercises in obedience, and in agility, watch- and protection-service, preparations for working on man, and finally the use of the nose, so far as the escorting dog uses it and as an introduction to work on the track and detective service. I must also in this respect lay emphasis on what I said above about the inter-

relation of the individual exercises and their progressive development. I would also like to say that where several words of command are suggested for the execution of an exercise, a choice can be made of that which is most suitable. The trainer can select the one which is easiest to say, and can also have one other, but he must, under all circumstances, abide by his choice. For instance, he must not say at one time, "here" to his dog, an another time "come here", and yet another time "come in". If for any reason a dog must be habituated to another catch-word — or sign or whistle — this exercise must be practised with the new word of command right over from the very beginning, though naturally in an abridged form.

I give, below, a list of suggested words of command, or catch-words, and wish again to emphasise what I have already said about the manner of giving the command, which must be short, quiet, drawled, sharp, loud or low, as the case may be.

- "Drop it," (short and sharp) for letting go after seizing, and for giving up the dumbbell.
- "Lie down," (quietly) for lying down in a chosen place.
- "Look out," (short, low) a warning sign.
- "Down," (short, sharp) for crouching, and lying down.
- "Up," (short) to rouse the dog from sitting or lying, for jumping and climbing.
- "Fetch it," for fetching the dumbbell.
- "Seize it," (quiet, somewhat drawled) for taking up the dumbbell in the preparatory exercise.
- "Seize him," (short, sharp, hissing) for seizing a man.
- "Heel," (short with accent on the "ee") for coming and following behind the feet.
- "Speak up," (short, encouraging) for barking, with a sharper intonation when continuous barking is desired.
- "Go ahead," (short) giving direction.
- "Here," "come here," (short) for coming to the master.
- "Crawl," (quiet but firm) for crawling after being told "down".
- "What is it?," (short, sharp) warning call to watch.
- "Left," (short) giving direction.
- "Hah," (short, sharp, under certain circumstances, drawled and low) warning sign.
- "Place," (short but firm) for the dog to go to his place.
- "Right," (short) for giving direction.
- "Sit," (quietly) for sitting.
- "Hah," or "Quiet," (low) for stopping barking.
- "S—e—e—k," (drawled) for work on the track and finding what has been lost.
- "Go ahead," (quietly) permission to run in front, after being at heel, also for encouragement.
- "For-ward," (quietly but firmly) for creeping, after being told to "down" (crouch).

I have already spoken enough about obedience and its visible proofs in unhesitating coming to the master on the word of command, and now turn once more to tractability on the leash, which also has already been mentioned. For correct breaking in to the leash, the dog, (who must sit down in front of the trainer every time before he is leashed), must first be put on the leash. The left hand must grasp the leash short through the loop, and the dog, (after the leader has placed himself on the right, close to his head by turning round), is made to get up by being told "up", and then to follow by being told "heel". When he says "heel", the leader must step forward, so that the dog, from the very beginning, is accustomed, when he hears the word of command to go on, to find himself close to the side of the leader.

I have already said, when speaking of the equipment, that for, some, time police dogs have been worked on a somewhat longer leash than other dogs. The right hand then grips the loop and pulls on the leash, while the left hand remains free to encourage the dog, by patting and caressing. Naturally the leather collar will be used. Old dogs, especially those who have been spoilt to follow, in their training or through the lack of it, are soon best trained with the spiked collar, or with the Hegendorf collar, by the help of which their faults in tractability can be eradicated. With a dog who follows correctly, the leash,



Fig. 401. Quiet on the Leash.

whether in the left or the right hand, should not be held too loose nor too tight, the dog rather, like the horse, by means of the bridle, should always be able to feel the hand of the leader, even when the leash is held easily and gently. If the dog remains in the rear, that must not hinder the movement of the leader, he must be spoken to, and told "heel", and thus encouraged to follow willingly. When once compulsion begins to be used, — a jerk on the leash or the working of the collar — the dog will soon acquire the habit in a short time. If, on the contrary, the dog strains forward, he must be checked by a short drawing in of the leash — no turning backwards —and told "heel". While using the same words, the leader can also turn short to the left, by which in all probability he will tread more or less gently

on the toes of the straining dog. By means of this drastic education, the dog very quickly learns that it is far more comfortable for him when he takes his proper place as soon as he hears the word of command. If a long wall is available, it can be very well used in the training. The trainer will walk so close to the wall that the dog cannot strain forward between the wall and his left knee. When in the open, some trees or posts can be used for the same purpose, towards which the leader turns sharp to the right, so that the straining dog accordingly gets mixed up with them and thereby gives himself a dig with the collar spikes, or his a head a hard bang. This word of command "heel" must also remind the dog of his right place, and when he takes it and keeps in it, he must always be praised. When he is to be released from the leash, after the training is over for the time, he must again sit in front of his trainer, who will then turn so that he places himself before his pupil, and pet him.

If the dog can be relied on to follow, after a sufficient number of days devoted to training in this respect, even on the crowded street and in all circumstances, whatever the counter-attraction may be, — and this a watchful leader will know how to oppose by busying himself with the dog, speaking to him and praising him, — the training can now be directed to the same exercise, off the leash. For this, the leader will loose the dog, while walking, if possible, without the dog's noticing it, and while continually holding the leash, if the pupil keeps his place he is praised, otherwise the usual means must be employed, and he must once more be put on the leash, and made to follow. Going with the dog following off the leash must be exercised with as great care as when the dog is on the leash. The dog must always keep his head close to the trainer's knee, he must turn sharp and at the same time that he does, and must stand still when the trainer stands. When told "go ahead", or "go on", the dog may run forward, but when told "heel", he must take his place again, wherever he may be when the command to come is given. I wish once more to draw attention to what I said before that, by means of his own quick gait, the trainer must facilitate for the dog the training in tractability and in keeping his right place.



Fig. 401. Training to the Leash.

Training to sit can be included in the training to walk on the leash. The trainer makes a short turn towards the dog, grips him with the right hand under the collar and gently lifts the forelegs without allowing the spikes in the collar to work, while the left hand presses on the buttocks and thus he brings the dog into a sitting position; for this he also says "sit down" or "sit". If the dog yields, he must be praised, and the hands will remain as they are, and will only be drawn away gradually as the dog raises the upper part of his body. The trainer will then remain standing for some time by



Fig. 403. Sitting.

the dog, speaking to him and praising him; and when the dog is sitting down, off the leash, he will later on step back a few steps as well. The sitting exercise must be concluded with "Up", and the forward movement introduced by "Heel".

Lying down, similarly, is taught by saying "lie down", whether the dog is sitting or standing. The right hand must grip the forelegs, and lift them up, while the left hand, seizing the withers, presses on them and forces the dog to the ground. The dog will lie with head erect, ready to jump up again, but he must not do this before being

told "Up". This exercise is useful for training the dog in house manners, and also teaches him his place out of doors.

Hegendorff calls training the dog to "down" (crouching) the quintessence of the whole training. He is right, for crouching is the expression of the most complete obedience, and helps us to attain it; and makes it possible, when once acquired, to exercise a strong control over the dog even at a distance. Training for hunting demands that the dog should know how to lie with his head stretched out on the ground between his forepaws. This "bending of the knee" is very salutary discipline for a stubborn fellow, but for actual service it is not so necessary, because the dog in a lying down position must be able to survey his surroundings. It is therefore introduced between the exercises of crouching and lying down for the sake of variation



Fig. 404. Lying.

when the method of training seems only to produce results which are rather similar.

The means for practising crouching are at first the same as those for lying. The word of command "down" is given short and sharp, after the head of the dog has been pressed to the ground (with the right hand) between the forepaws and kept in this position. The leader must at first keep his hand for some considerable time over the dog, which indeed is not altogether comfortable, but then "No success without work". Erection of the head, turning it away to one side, laying the whole body over to one side, or lifting the hindquarters must not be allowed; they must be corrected by "Hah", and suitable help given by the hand; and the command "down" always repeated so that the dog may learn to associate it with the right place. After the dog has lain quite quiet and properly — always praise him — then follows the command to sit or rise, on which the pupil must raise himself, sit down before his trainer, or stand at his knee. A diligent practice of this exercise may be interspersed with runs and in course of time, the assistance of the trainer's hands is dispensed with, and he

may stand upright; yet he must be always ready to seize the dog if he shows any desire to leave his right place. If the dog tries to lay himself on his side, or to raise his hindquarters, a light smack on the buttocks will not come amiss. If the dog spreads out his legs in opposition, the trainer can facilitate the drawing down of the dog by passing the leash, which has been somewhat lengthened,—naturally this exercise must be done on the leash—under his left foot, which has been somewhat advanced, by which he thus compels the dog under this increased constraint to go under, and which also forces the spikes of the collar into his neck. The Hegendorff collar offers a most valuable help for the practice of this exercise, for its additional straps are fastened on the forequarters of the lying dog close to the spiked collar, so that he cannot stir, nor raise his head nor hindquarters without punishing himself. If the dog lies quietly, the trainer must change his place, at first behind the dog, then he must walk away from him, and gradually increase the distance, (hence the necessity for a lengthened leash), and finally, the performance of this exercise must be demanded of the dog when he is off the leash. It

is the most reliable test of obedience to introduce this frequently when running, and it must always be polished up, when he shows carelessness in the performance of it. Oberwachtmeister (Chief Inspector) Thielhorn from the Government Breeding and Training Institute at Grünheide, to whom I am most grateful here, and for

Fig. 405. Crouching.



other most valuable hints from his ripe and wide experience, adopts a somewhat shorter but sharper method of instruction. It is his custom to suddenly press the dog, who is on the leash, on the ground with a short, sharp, threatening "place"; he throws the dog down as it were and sets him there, and remains with his hand held ready over him in a kind of paralysing terrorism, which he uses as a means of transferring his will to the dog. This lightning-like flinging to the ground, and making the dog lie there, as under a curse, seems very easy and effective, and in the case of hard dogs, produces a quick result, but whether this treatment can be used for all, especially for sensitive dogs, I rather doubt for the moment. Thielhorn is averse to praising the dog when he is thus lying down, for he is of the opinion that he would regard that as a permission to rise up again; and praise would undermine the moral effect of the method utilised to produce the result. Because the dog, through his house training, is already accustomed to the meaning of "place", and also to lying down in a certain place, and remaining there, this word of command can be very well used for this exercise also.

According to Hegendorff, creeping can be developed from crouching in the following manner. The dog must crouch in front of the trainer who will then hold the leash short, step backwards, and call out "forward" or "crawl"; for this, the leash, which is held low on the ground, is drawn backwards and held short. The whip, held over the dog, prevents him from getting up, and will be used to punish all attempts to get up; while the trainer himself will step backwards as far as the dog must follow by creeping. The leash is gradually held less short, and then at last the long leash is taken, twists and turns in the distance to be crept are introduced, and finally the exercise is demanded of the dog off the leash. It goes without saying that this must always be done, with intervals, because if done for any length of time, (any dog will do this for short stretches in play), it tires him excessively. This exercise both in itself, and for the use which we make of the dog, is of little worth, but it is, as already said, an excellent means of subduing hard and stubborn dogs, and has a better and a more lasting effect as a punishment than thrashing, and for that reason should not be altogether ruled out of the training.

In teaching the dog to lie down, we must distinguish between lying down with, and without an object (lying down free, and lying down on the watch). The purpose of lying down is to keep the dog in a certain place where he shall wait for us, or guard a particular object entrusted to him. By means of this, we are preparing to pass on to another exercise to be learnt later. According to the purpose in view, the manner of concluding the lying down is taken into account. The dog who is lying free can be called or whistled to by his trainer from a distance to come to him; but when he is lying down by an object, the trainer must, in all circumstances, return to him. When choosing an object for such a purpose, it is best to use something belonging to the trainer, and never part of the dog's equipment; something which carries the scent of the trainer, by which the dog understands more plainly that he must remain by it until his master returns and can resume possession of it. In choosing a place where the dog must lie down, while on service, it is best to select a place where the dog



Fig. 406. Thielhorn's method of training to crouch.

himself would like to lie, but at anyrate this should not be entirely in the open when a place can be selected which will afford some covering for his back, protection against the draught, beating rain and sun-stroke. There the dog must be taught to wait for his master under all circumstances, and for hours at a time, without allowing himself to be distracted from his duty by strangers or other dogs. This, it must be admitted, requires much training, obedience, fidelity, a high sense of duty, and a never-swerving concentration on the work in hand, which can only be expected from a dog which is kept and brought up in a loving and intelligent manner.

We can develop this habit of lying down from the practice of lying or crouching. I have already said that a dog lying down in this way with his head raised was more to the purpose, but that one who is made to crouch is more subservient to our will, and this will facilitate the practising. For lying down, the word of command to be used for lying or crouching (i. e. "down") must first be given, which will then lead on to "lie down", and which, later on, will be the only command given for this exercise. The dog who is lying free can be called from a distance by the trainer, which, however, must not take place till the dog has acquired this habit thoroughly; while during the time of schooling, just as when lying by an object, he will be set free by being told "up" and "heel".

This exercise is only done on a long leash. The dog lies down, and the trainer goes away, stepping backwards so as to keep his eye on him, till at last he reaches the end of the leash, about 25—35 yards. Every attempt to raise his head — from the crouching position — and also to get up, and to slink after must be prevented by a repetition of the word of command. When absolutely necessary, the trainer must return to the dog, and compel him to resume the correct position by means of scolding and threats. If the dog has slunk after him, he must be made to crawl back to his place. If the dog will lie down properly for some minutes in sight of his trainer, the trainer must proceed to hide himself, still holding the end of the leash, but yet continually watching the dog, and immediately taking strong measures if he should forget his duty. The trainer will then go away out of sight and hearing out of the dog — he must not whistle — and then finally he can let the leash go, as an experiment, and change his position. Naturally this lying down will not always be tried in the same place; the dog must learn to lie down anywhere, in a lonely place, in a field, a wood or in a crowded place. If he lies there reliably on the leash for half an hour, the trainer will then proceed to practise lying down off the leash; first, again in sight of the trainer, and then as I have just described. The conclusive test for this is to make the dog lie down, off the leash, for one hour.

If this habit is thoroughly acquired, the dog can similarly be trained to lie down by an object. The object itself is to be frequently changed. Here too the dog must finally be relied on to lie in one place for at least one hour.

It is very useful, even in training the dog to lie down when on the leash, to include some experiments with strangers — to entice, call, whistle, throw scraps of food at him, to eject him, or to hunt him



Fig. 407. Lying down, off the chain.

from his place, by means of suitable and supervised assistants — so that the behaviour of the dog can be observed in these circumstances, and that the right kind of help can be given him. If, for example, the dog is forced from his place, he must, immediately after being disturbed, lie there again of his own accord till the trainer returns.

These experiments must also be conducted when the dog is off the leash, and when he lies by objects, he thus will understand all that is involved in watching and guarding.

The afore-mentioned Hegendorff collar is also of very valuable assistance for teaching how to lie down, for it will help the dog more quickly over the initial difficulties, and make it thoroughly clear to him that he can do nothing else but lie down when told, and remain there by moral compulsion.

Some dogs learn how to "fetch and carry" very quickly, while for others, it involves much difficulty. It is in itself a very good exercise in obedience, and also strengthens the sense of duty, because it compels the dog to give up to his master the object which he takes from him, and it forms the ground work on which other very important exercises can easily be built.

It is often debated by experts whether it is easier to teach an older dog which is yet "raw" to fetch and carry, or whether it is better



Fig. 408. Lying beside an object.

to have a dog for training whose fetching instinct has already been aroused in his puppyhood, and turned to good account. The same problem has its interest for riding masters, indeed for all riding masters, of whom some insist that their highest accomplishment "the military seat" is most easily taught to recruits who have never had any previous experience of a horse, and are accordingly in this respect open to all instruction without the handicap of any particular habits already formed. This may be true of the regulation Cavalry seat, but what about that feeling for the horse, and for that keen sensitiveness for the instinctive and correct distribution of weight when on his back, which makes such a difference to him? It is exactly the same with the dog. I should very much like to open out my heart with Hegendorff and other service dog men on the subject of our various experiences and to say that is it advisable for everyone who brings up his dog from a puppy, and wishes to train him up in the way he should go, to arouse this fetching instinct very

early on in his dog, and to prepare for work by play, and thereby also to eradicate bad habits which indeed afterwards are not so easily uprooted.

This practice of fetching and carrying must be divided into three stages: the seeking of the object to be brought, picking it up, and finally bringing it. We already incite the young dog to seek and pick up, when we show him and throw for him a small wooden ball, a hard ball, or best of all, a light round stick of wood, or finally a wad of straw, encouraging him at the same time by the word "fetch it". Every young dog will be only too pleased to jump off after the object when it has been thrown — the chasing lust — and nearly every one will incite him when he seizes the prize for the first time, by saying "seize it", which facilitates this in a most appropriate way. But here comes the difficulty. The dog must not play around with the object, he must not gnaw at it, he must not throw it into the air nor shake it round his ears, neither must he career round like a mad thing with it, nor, when possible, slink off with it to his kennel, or his playground, but he must bring it to his master. As soon as



Fig. 409. Lying beside an object.

he has taken it up, the young dog must be enticed, and when he comes with the object, he must be highly praised and also rewarded. If he comes back with nothing, the game must be repeated and, as soon as he comes back with the object, he is then to be rewarded after it has been coaxed away from him, by saying "drop it". Then indeed we have won the game, and after a time, while we are busied with him in another place, the experiment may be repeated. His zeal will grow with practice, until the time will come when the dog himself will beg and entice us to throw something forward for him. But beware of these objects which the dog brings forward of his own accord!!! The dog has already nibbled and gnawed at his own toy, and will then easily fall back into this vice later on, and all that is loose, and flaps on the object incites him to play, so that it is better if the master himself has something suitable at hand. This fetching and carrying back must always result in a joyful, and as quick a gallop as possible, for the young dog must be made to know that he will be praised for this. He will, without further ado, joyfully storm after the object which has been thrown in front of him. Here then

he can be checked gradually as a preliminary and held on the leash — passed through the ring of the collar, but not hooked — so that he may be made to sit, and will only go to fetch when first told "fetch it".

If he is to practise the exercise in the approved manner, the dog must be held on the shortened leash, and sit before the trainer, and must then learn how to seize and carry the dumbbell. For this purpose, the trainer grips the dog's mouth, with the left hand so that the thumb comes on the right side and the fingers on the left side of the upper jaw, behind the canine teeth. Thus it is easy to press on the bridge of the nose, and the upper lips, but care must be taken that this is not made too tight against the teeth so as to cause pain. It is a good thing to practise this grip beforehand, either while at play, or on any other convenient occasion, before either dog or trainer have learnt to know anything about looking after the teeth or the administering of doses of physic.

Against this grip, which makes breathing more difficult, the dog opens his mouth — if he does not do this, the right hand must help by seizing the lower jaw — the trainer calls out "seize it", and then pushes the light dumbbell into his mouth, which the dog must hold for a short time. When the trainer says "drop it", it is taken away from him again. A dog who is accustomed to fetch will generally hold the dumbbell willingly; if he is not willing, the hands must be kept on him, and he must be continually praised and encouraged. Hegendorff's collar, which I have already often mentioned, has two auxiliary straps which can easily be



Fig. 410. Fetching, holding the Dumbbell.

used to train especially stubborn pupils to hold the dumbbell tight in their mouths.

The dog must then learn not only to allow himself to be given the dumbbell willingly when told "seize it", but to seize it of his own accord from the right hand of the trainer. This dumbbell will be gradually be held further and further away from the head of the dog, and finally placed on the ground. The right way to "drop it" must also be taught. The dog must not drop the dumbbell on the ground even when told to "drop it", but must always give it up into the hand of the trainer. With dogs that are inclined to let it fall, the left hand must grip the jaw underneath, bending it forward to open it before giving the word of command "drop it", while the right hand seizes the dumbbell when the command is given. It is also useful during the progress of the training to sometimes snatch at the dumbbell a few times with the right hand, repeating "seize it" — without taking it away from the dog — and then only to demand it to be given up with

„drop it”, so that the dog shall have a thorough grasp of this word of command.

If the dog has learnt to seize the dumbbell willingly when told to “seize it”, and then to sit quietly with it in his mouth for a few



Fig. 411. Fetching, giving up the object.

minutes, and finally to give it up properly when told “drop it”, the trainer must then step back somewhat, making the leash longer, and allow the dog to get up, come to him, sit down again, and give up the dumbbell.

The dumbbell must now be laid on the ground, a few paces from the dog, the trainer will then return to the dog, who all the time must be sitting down. When he calls out "fetch it", he will run to the dumbbell with the dog on the leash, and will then command him "seize it"; afterwards he will run back a few steps, and make the dog give up the dumbbell. When the dog has thoroughly mastered this, the long leash is taken, and the dumbbell is no longer laid down, but thrown forward a few yards; and careful attention must be paid that the dog does not immediately career after what has been thrown, but remains sitting till he hears the word of command "fetch it", which, by the way, is a very good test of patience and obedience.

The leash is then dispensed with, and the dog is gradually trained to bring other objects, in which case the manner of seizing is again to be practised as at the commencement of the training in this exercise.



Fig. 412. Carrying an object.

After the light dumbbell has been used, then the heavy one may be tried. This can also be thrown further away, and finally in such a way that the dog cannot see it at once, but must first seek for it. Then come in their turn, the usual articles of various kinds used by the trainer, both light and heavy, (a preparation for training to find what has been lost); and also such things that the dog does not take up willingly, i. e. cold smooth things, especially iron, and all metal articles. Glass bottles, and metal articles covered with verdigris, naturally, will never be used by an intelligent trainer for these exercises. In order to teach the dog to overcome his unwillingness to pick up iron, Hegendorff at first advises the use of a long nail knocked into a piece of wood, or into the usual dumbbell, and that the number of these nails should be gradually increased. To expect the dog to bring objects which can be eaten is a torment, from the point

of view of the dog, and indeed a most searching test of obedience; but even this is not too hard for a dog who can be relied on to fetch. When he knows how to bring and to jump, he must then be exercised in fetching the dumbbell over obstacles which he must jump or climb.

I have already said something, when speaking of the schooling, about how the dog must be broken of the habit of taking food from strangers, or picking up stray morsels. A method of teaching which is too severe gives bad results, but appetising food may be offered by strangers to the dog when he is on the leash, and if he sniffs at it in spite of his trainer's warning "Hah", a good jerk on the collar (which must be the studded-collar) must be given and a sharp lash of the whip by a helper. The same method can be adopted in the open



Fig. 413. Refusing food from a stranger.

field where morsels have been laid out expressly which, on account of the scent, must not be laid there by the trainer or by any of his relations.

I now come to the exercises which demand agility. Every dog can naturally jump and climb, and the young dog learns it from his elders, if at first he lacks the courage. Poor town dogs which have very little opportunity to come into the open and really let themselves go, sometimes indeed show themselves very clumsy. The training is accomplished by gradually increasing the demands made on the dog in this direction, thereby developing his efficiency in this respect so far that, on command he will clear a certain obstacle, even when it appears to him to be more natural to go round it, which is nearly always the case with artificial obstacles.

To practise the High Jump, the easiest method is to place a few boards on the ground in front of a door, at first only about 10" or — 1' high, so that the trainer can step over it in his stride. He will then go with the dog on the leash up to the obstacle, and call out "over", or "up", and will himself walk or jump over it. A dog who follows willingly over this low obstacle is to be praised, and the trainer and dog return and repeat the process. The obstacle is gradually made higher, and trainer and dog must take a run. It is useful to accustom the dog from the first to run to the centre of the obstacle, so that he has no idea at all of turning away from it, and the trainer must keep himself somewhat to the right. It is also good to



Fig. 414. High Jump, over 4 feet high.

accustom the dog to make a return jump, and always to demand a double jump, (there and back) of him. When he can thus jump between a door, a special jumping wall, standing by itself, is then used, naturally in the same way, from the very beginning, while the height of the jump is continually increased. If the obstacle becomes too high for the trainer, he must let the leash go just before the obstacle, run round it and take up the leash again on the other side, or he must remain standing before the obstacle and make the dog jump to and fro on a longer leash. Finally this is practised without the leash, and then jumping is combined with bringing, and for this the dumbbell is thrown over the obstacle.

The Long Jump is practised in the same way, at first over a small trench, if possible filled with water, or at least with an abrupt edge, while climbing is developed by a gradual increase in the height of the jumping wall. Finally, this can be practised in the country over natural obstacles, fences, hedges, walls, wooden fences, ditches, steep places. Dogs very easily learn how to climb over high wire netting, while climbing ladders is as "easy as falling off a log". Any clever dog can climb a ladder, but climbing down is a very dangerous proceeding, and above all, the dog must not be turned round on the way down, nor made to climb up backwards. Climbing trees is only seldom be asked of a dog when at work, for him it is not such an important matter, as getting over an obstacle, but it is a useful accomplishment, if he can do it, nevertheless. Jumping and Climbing exercises therefore must not be overdone; they are a great strain on the dog, especially climbing. Climbing exercises which involve a height of 6'—7' are ample; a dog who can do this, will, *au grand sérieux*, do a little more "when the devil drives". Finally, we must remember that we are DOG trainers, and that our aim is to turn out thoroughly good service dogs, and not fleas nor circus-stars.

I include water work among the exercises in agility; it is an absolute *sine quâ non* to demand this of the dog, for any dog may find himself in a situation in which he must not only go into, but also swim in the water. Every dog who has been correctly brought up from puppy-hood to paddle in the water, will go into the water without any further ado. Dogs who have never seen large stretches of water show themselves water-shy later on, but these again are mostly those poor unfortunate town dogs or dogs who were wrongly treated by being thrown into the water forcibly and suddenly. Similarly, every dog can swim naturally, for he makes the motions of his natural gait, like every quadruped; it is only man who is unable to do this, owing to his different position, and the different use he makes of his limbs. The dog also, by treading water, can hold his head over the water when necessary, but then he cannot move forward, but must adopt another position, and this he can do as naturally as the so-called "poodles". To take a dog by surprise while standing on the bank, or to throw him by force into the water to break him of water-shyness, and to induce him to swim is a mistake for this reason, that the fright



Fig. 415. Landing after a jump over a hurdle 4 ft. 6 ins high.

occasioned by the surprise, the sudden change in his situation, and indignation over the malice and the compulsion of it leave the dog

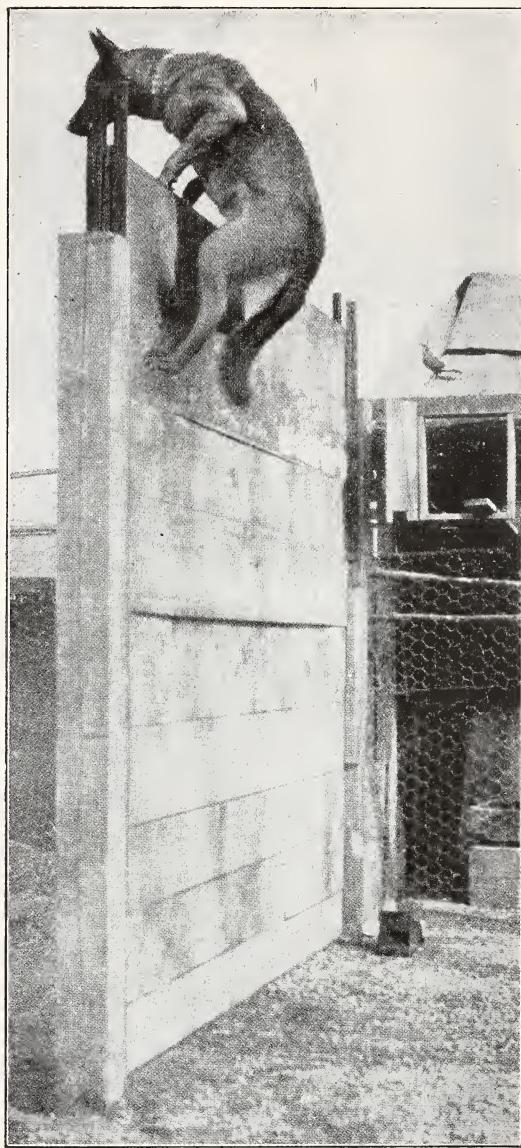


Fig. 416. Jumping over an obstacle 7 ft. 6 ins. high.

no room for thinking of anything else, and he comes out of the water as soon as possible, and will not forget this unpleasant adventure so

very easily. Quite apart from this, there is also the fact that to throw the dog suddenly and unexpectedly into the water is to inevitably force water into his ears. This is something most uncomfortable for the dog, and to avoid this and to keep his ears free from water he lays his ears back close to his head. The interior of the ear also protects, as is well known, that place by which men and animals recognise the position of their bodies in relation to the centre of the earth, and thereby preserve their equilibrium. Water when suddenly forced into the ear produces first of all disturbances in this automatic guard station, which can lead at least to a passing unsteadiness, giddiness and discomfort. Many a splendid swimmer has lost his life through this. All dogs do not swim equally well. Clumsy, irritated or frightened dogs try to keep not only their heads, but as much of the forepart of their bodies as possible, out of the water; and therefore assume a wrong half-erect position, and beat the water all round themselves with their forepaws, instead of making it go behind, and they thus splash themselves in the eyes and ears — something very disagreeable for a dog — and try to come to land again as soon as possible. Here habituation, soothing talk, and a gentle pushing under of the parts held too high while swimming can help much. Quiet, deliberate, dogs who do not lose their heads, on the contrary, swim in the water with an even forward movement; they only keep their heads above water, and swim right through without any perceptible straining even over long distances, and always joyfully go off of their own accord to bathe even in the winter. Let it here once more be briefly said that the good, almost water-proof smooth hair, which feels the effect of the cold only very slowly, if at all, renders our dog especially adaptable for work in the water. It must be remembered in every exercise in the water, that the dog lying deep in the water, has only a limited circle of vision, that the mirror on the water dazzles, and that here there is no such thing as scent. In seeking for objects, the leader must facilitate the finding of them by standing in the foreground on the land and shouting "right", "left", or "straight on".

The easiest way to accustom the dog to the water is for the trainer himself to go into the water with the pupil on a fine warm day, in a shallow place, where the sun also is not too dazzling, and



Fig. 417. Coming down the other side.

where it is possible to paddle round and play with him there. The example too of another good water dog has a wonderful effect so that the initial shyness and astonishment will soon be overcome. The trainer will afterwards find deeper places, where the dog is at once out of his depth and must swim, and he must also swim in front of the dog or make him follow a boat. The more the pupil acquires self-confidence, the greater are the demands that must be made on him, until finally the exercise in fetching from the water can be commenced, but care must be taken from the beginning that the dog, when he comes from the water, first sits down and gives up what he has found, in the proper way, before he shakes himself, for which purpose he would

lay the dumbbell "any old where" on the ground. Hegen-dorff advises the following for the overcoming of water-shyness. Place a post about 3 feet long or so, having a ring on the top, in the ground on the further bank of some suitable stream, where it is flat if possible. Pass through the ring a stout cord, both ends of which are tied separately on the dog's collar, in the ring which has no swivel, the dog being on the near bank. On this endless leash the dog is then made to go into the water and to swim to the other side, and then to return; it is very useful to make the dog thirsty and eager for water by a quick run before the exercise.



Fig. 418. Climbing down a ladder.

dummy is put into the water, and the dog is required to fetch it out. Now is the time to teach him the correct grip when rescuing anyone who is drowning. The place for the grip (which must be previously shown to him when on land, and again when in the water, by the trainer himself or an assistant) is the arm, not too far from the shoulder. The dummy when seized there can easily be moved and guided, but this will be effected less easily if seized in another place. A dog can only master and rescue a drowning person if he seizes the arm. When the dummy has been landed, care must be taken to see that the dog really lands it properly before shaking himself.

After exercising with a dummy, practise can be made with someone who pretends to be drowning, (*a good swimmer*), who must

When the dog can be relied on to swim and fetch from the water, the swimming

indeed protect his left arm, which he will hold out to the rescuer, with a good cloth bandage.

The good protection and escorting dog must, as his name indicates, guard and watch over us and our property, and must help us



Fig. 419. Jumping up a tree.

to find it again when it is lost. For this, he must have watchfulness, sharpness, and a good sense of smell. The exercise by which we attain these ends we call "man work", or "nose wolk".

Let us first take "Man work", for which there must be a whole series of preparatory exercises. An assistant is necessary for nearly

all the following exercises. I have already spoken about his general duties, and the instructions to be given to him. The assistant for man work must be a stranger to the dog, and under no circumstances



Fig. 420. Down the precipice.

whatever must he belong to the family of the trainer or to the circle of his friends.

There are many ways of teaching a dog to bark on the word of command. The easiest and the most certain method is to accustom the

young dog already from early on at the word of command "speak up", and to make him obey it. There will be many opportunities for this, which every trainer can easily discover if he observes his dog at all, when the dog most easily and of his own accord barks or gives tongue.



Fig. 421. Water work, the dog swimming.

The dog barks from joy, from irritation, in anticipation, and finally as an expression of his watchfulness, his mistrust, and his rage. The barking of the dog in anger already becomes baying, but as the dog must "speak up" when commanded, it is better that we should not avail

ourselves of this last mentioned motive to practise this but employ other means. I would also here like to emphasise the value of a good example as facilitating this.

The trainer too must be on the watch for those opportunities when the dog barks of his own accord e. g. when he greets his trainer,



Fig. 422. Rescuing the dummy.

when his food is given to him, when he is let loose in the open, or else the trainer must create opportunities by postponing the dog's feeding



Fig. 423. Landing the dummy.

time, or before letting him free, by intensifying the excitement of the greeting, by calling out to the dog, whether shut up or on the chain, and even by seeming to go away from him again. As soon as the dog really begins to bark he must be told to "speak up" and be praised for his obedience. If these methods do not succeed, the habit

of watchfulness must be utilised. The trainer will go with the dog into a room, and will arrange to have a noise made outside, by a helper who will speak, call or otherwise "make a shindy", and when this meets with no result from the dog, the helper will proceed to "barge" against the door. The dog, who pricks up his ears and, when encouraged to "speak up", barks, is to be praised. Thielhorn seizes the dog and induces him to bark and yowl by giving him light blows on the fore-paws, at the same time repeating the word of command.

In a very short time a dog so treated will bark at everything, and only on the word of command without further ado. When being trained to do this, he must, as always, sit before the trainer, and must also bark every time and give full tongue, and must not confine himself to it when his memory is jogged, or when he is commanded. Some dogs acquire the habit of barking in a most comical way, just like some children when they "say their piece" with expression in a way



Fig. 424. Barking.

that seems to savour of dramatic art of the very best Irving traditions, and yet in reality have not the smallest idea of how to make proper use of their voice.

There are occasions when not only continuous but also untimely barking can create a disturbance, we must therefore have some means of curbing this musical talent. This can be done by saying "hush" or "quiet", and by quickly laying hold of the dog's mouth and bringing his head down at the very moment when he is about to bark, or shows himself "ready and desirous" to bark; or, on occasions that give rise to such barking, we can then put the afore-mentioned mouth strap on his mouth and say "shut up", if the specially inciting cause to bark is continually present. A too frequent repetition of this last exercise is to be avoided, and the dog must be trained to desist from barking on the special command "quiet".

Every good shepherd dog is born watchful; that this statement does not include the poor prisoners of the kennel we know by sorrowful experience. Already the little pup knows how to give expression to

his watchfulness, by means of yelping. If he desists from this later, through being kept alone, we must resort to the last means I mentioned as useful in inciting to bark, which is especially effectual at night. Now real watchfulness includes not only howling and barking, but also the power to distinguish whether the event of which he gives notice has anything to do with the store, house, or yard which he is watching, and finally correct behaviour towards strangers. This necessary power of distinguishing lies in the blood, and is a *primaevae* inheritance. The dog protects his own district, when once he has had



Fig. 425. Barking to order.

the opportunity to know it, and to feel himself at home. Then he will remain quiet in a town flat when anyone goes upstairs to a higher storey, and in the country too when a stranger passes the yard. He will only give tongue when the stranger, whom he recognises to be such by his voice and step, comes into his room, his hall or his yard. In order to secure the correct behaviour here, the owner can easily have recourse to encouragement, praise and blame. The dog has already learnt how to behave towards strangers in his schooling. The stranger who comes into the yard is announced, accompanied to the house, and not allowed out of his sight, but he must not be brought

to a standstill nor attacked. No stranger, however, must be allowed to leave the house, who is not accompanied by one of the family nor one to whom he has not been properly "introduced". If both these considerations are lacking, the man is suspicious, and then it is the duty of the good watcher to bring him to a standstill, but no more, and to bark till someone comes from the house. If the watchman himself is slack at night, or if the trespasser presses on, the right kind of dog will already know how to help himself. Generally a good dog



Fig. 426. The yard-watcher at work.

will so behave himself, but the owner can, by careful help with well-drilled assistants, and by constant attention add much to this natural capacity, and so secure himself in time against all eventualities and train up a careful watcher.

We describe a dog as "gun-sure" when he does not shrink nor run when a shot is fired, but stands still. A sudden shot can frighten any dog. To run round, and to look about for the reason of this disagreeable exploding "row", which smites on the drum of the ear is

no indication of gun shyness nor indication of fright. This is shown by the drawing in of the tail, "shivering like a leaf", seeking refuge between the legs of the master, and, when possible "making himself scarce". Flinching, however, can be caused by fright if we begin to "blaze away" indiscriminately. The trainer then must gradually accustom his pupil to loud explosive noises by clapping his hands, banging two boards together, throwing "toy-torpedoes" and by the use of a toy pistol. After these preparations, he makes the assistant fire with blank cartridge in a suitable place; he first stations himself with the dog at a fair distance away, and then goes towards the place, always speaking to the dog and always approaching nearer, till at



Fig. 427. Gun sure.

length he allows the pupil to sniff at the still smoking "shooting iron", and shoots with it himself. The dog must also be habituated to the dazzling flame of the shot at night, by first switching on and off a pocket lamp, and then by the actual firing.

The further exercise in "gun sureness" is regulated for the protecting dog by according to who has shot. If it is the trainer himself who has fired, the dog must hold himself in readiness to attack and help, and the dog's place is at the side of his master. If a stranger has shot, the shot was presumably directed against the trainer or against the dog himself, and the dog already "feels in his bones" whether this is the case or no. He will not therefore attack a harmless sportsman who has had a pot at a hare, with whom neither he

nor his trainer have anything to do. If, however, the shot were fired against the master or the dog, the dog must storm to the front, engage the assailant, and disable him. He must not run in the line of the shot but must get to the side "like greased lightning" so as to seize the arm of the hand that held the revolver. All the work in this connection already belongs to "man work" particularly, but I wish, however, to deal with it here by way of anticipation. The dog, when absolutely gun sure, and on the leash, is led at a quick run by the trainer, with appropriate words of command giving direction



Fig. 428. Baying.

"right", "left", or "seize him", against the assistant who is firing, and then he is set on to attack his right arm which is raised, when also quick ducking, circling round, and continuous barking are practised. The assistant is instructed not to fire at the dog's face, so as to avoid injury to the eyes with flying wads or grains of powder, but in front of the dog, somewhat to the side and on the ground, or when he is nearer, over the dog, but never senselessly into the air.

When we speak of "Baying", we mean the deep growling noise with which the dog barks at anyone who seems to be a suspicious

character. Every observant keeper of a dog recognises this insistant warning sound when he hears it; it is the "hands up" of the dog against an intruder, or anyone who has roused his suspicions. This baying is easily distinguished from the ordinary tone of the watcher, from the bark of the dog who is joyful, from one who is giving tongue for his own private reasons, from the clear-throated, challenging bark at some distant object, and from the reverberating tone, and knell of the service dog barking when he has discovered a dead body.

This baying should announce danger to the master, and warn the object of the dog's suspicion to give the place a wide birth, or

"bring him to a stand", as the technical expression describes it. "Bringing to a stand", and barking then are to be used against a suspicious character, but they must not lead on to direct attack. In practising this, the most careful attention must be paid, for we do not wish to train a dangerous monster, but a serviceable and conscientious dog. The dirty and ragged assailant, who, if possible, should be reeking with sweat and alcohol, and not clad in the safety suit, so places himself, that he already arouses the suspicion of the dog, behind a tree or a wood pile, a fence, or in a dark corner, and remains there quite still, doing nothing to irritate the dog, either by making a noise, or by moving. Early morning is especially suitable for this purpose. The trainer takes



Fig. 429. Stopping the man and barking.

the dog on a short leash and passes by the place where the assistant is standing. If the dog takes no notice of him at first, the trainer calls his attention to him by saying "speak up", but under no circumstances does he urge the dog to attack him. If the dog barks, the trainer must remain standing, and will make him continue to bark, while praising him, and then he will begin to walk round the assistant about 2 or 3 yards away, keeping the dog all the while between himself and the assistant. The assistant must remain quite still, and make no hasty motions with his hands, but turn round slowly, following the movements of the dog. The dog is then to be praised, and taken away, to be given a run, and talked to,

to calm him. If the dog wishes to jump on the assistant and seize him, he is to be restrained by "hah" and a strong tug at the spiked collar, and must crouch and be made to crawl. *The man who is standing still, must in all circumstances be brought to the notice of the dog, who must only bark, and never attack.*

As soon as the dog shows himself too sharp, correspondingly strong measures must immediately be taken. Later on, the work will be done with the dog on the long leash and when he thoroughly knows his business, it will be repeated off the leash, when at first the trainer will keep near the dog, but afterwards will remain further away. This exercise must be constantly rehearsed, even when the training is completed, from time to time, so that the owner can be perfectly sure of the correct behaviour of the dog under these conditions.

When the dog can be relied on to know how to bark anyone to a standstill, training to watch an object can then be proceeded with, (which corresponds to lying down by an object but in an intensified form), while it furnishes a preliminary exercise for making the dog sharp. The dog is now made to lie down by a tree, or a post in the ground on the usual word of command, and is put on the chain. A large object, bearing the scent of the trainer, is laid by him, and the dog by a suitable word such as "watch it" is made aware of it. The trainer then takes up a position somewhat to the side, while the suspicious character again approaches and passes by the dog, out of reach of the chain. If the dog does not trouble himself, he is to be made keen by the trainer saying "speak up", and if he bays he is then to be praised. The assistant must now stand before the dog, and remain there, irritating him with motions, beating the ground with his stick, and trying to reach the object with it. The trainer, on the other hand, encourages the dog with "watch it", and the dog must finally so place himself that he keeps his adversary always in sight, while not leaving the object to be guarded. As the practice proceeds, the chain can be lengthened by being hooked on to another, but in this event, special attention must be paid that the dog does not go too far away from the object — so that it could be filched by a second assistant, for example — while the trainer all the time keeps himself well in the background. There are also to be pauses for rest, during which a respectably clothed assistant can pass by,



Fig. 430. Guarding an object.

and any inappropriate sharpness may be checked by talking to the dog, and "quiet".

Seizing is easily developed from guarding. The assistant makes a grab at the object to be guarded, and the dog in turn is taught to counter this by warding off, seizing and biting. Naturally in this case, the assistant must be adequately protected against biting, but if the whole proceeding is conducted with due care, the arm protection band for the right arm will be sufficient, for the arm only need be



Fig. 431. Transition from watching a prisoner to seizing a fugitive.

brought within reach of the dog. A good sharp dog will already take steps of his own accord for adopting the only possible method for warding off the pretended robber. As a word of command, it is best to use "seize it", said short and sharp, for this is already known to the dog from practising fetching in a similar way, and the inciting intensity of the tone in which the command is given encourages him to grip fast. If he does not do this, the trainer, who must naturally remain near the dog for this exercise, must, by continual inciting,

and by his own behaviour, help to make the dog furious. The assailant, on the other hand, by threatening the dog with his stick, by stamping and beating on the ground, by his own advancing and drawing back, increases the rage of the dog, and finally offers his right arm to be bitten and thoroughly worried. *During the practice of this exercise, the dog must on no account be beaten, he must always have the impression that he is the stronger, and the master: while the bearing of pain and gallantry in the face of a hail of blows will be taught later on.* For this



Fig. 432. Helping his leader.

then naturally, no heavy stick will be used, only a flexible twig, or at anyrate a thin cane. The dog himself will already have learnt of his own accord to cleverly avoid the blows.

This can naturally also be taught in another way. The dog is taken on the short leash — the long leash is used later — and the trainer goes with him against the assistant, who at first is out of his reach. Later on, the assistant, properly protected, will attack the dog, now off the leash, but he will in this case attack the trainer as well as the dog.

It sounds all very fine to talk glibly of training the dog to seize the right arm only, but our experience with the flocks shows us that this goal is well within our reach; still, in moments of haste and irritation, even the most reliable dog makes his mistakes. In a real struggle with a man, the chief consideration is that the dog shall help his master quickly and efficiently, and not bother his head too much about overpowering his adversary according to "Queensberry Rules", so long as he lays him out promptly, and without bungling. The right



Fig. 433. Helping his leader.

arm is not always to be had for the asking, and a secure grip on the thigh, or jumping from behind, so as to bring the adversary to the ground through collision with him, can very well answer the same purpose. Therefore the assisting dog must be left to himself to seek out the best point of attack; he is no foolish kennel animal, for he will already at this time prove himself a right good "pard".

The duties of the dog on guard fall into three categories-, withstanding an assailant, meeting the attack, and behaviour towards the assailant when he runs away. I have just spoken of the first of

these duties, and how it is discharged. When the man desists from attacking, the dog must also desist from warding off, but this only on the master's word of command. This must be very carefully practised and rehearsed over and over again, for this desisting from an assailant is the severest and most difficult proof of the most implicit obedience, and must be thoroughly acquired, otherwise the dog is useless, and a public danger; for he will engage both guilty and innocent with equal facility. *The adversary who ceases to attack, and*



Fig. 434. Helping his leader.

who stands still must be understood in the mind of the dog as one who dares not renew the contest.

This desisting is obviously practised with the dog once more on the short leash. With a short, sharp "Off", he is taken away from the assailant by jerking the spiked collar, and must now remain standing in front of him, barking. The assistant must, naturally, after the dog has been taken away, stand stock still himself. The dog has already learnt that he must only bark at a man who stands still. The pupil is now praised and petted; if, however, in spite of this, he still shows a pugnacious inclination, he must have a course of crouching and creeping. The leash must only be lengthened very gradually

when the dog is thoroughly reliable, and finally he must be allowed off the leash.



Fig. 435. Following a loafer.

When the dog has really mastered this, a beginning can then be made with the pursuit of a fugitive. This practice can also be very important for the dog of the amateur when it is necessary not to lose sight a criminal, who had designs on the master or his possessions,

till the arrival of the police. The assistant, who has been standing still, will suddenly make a turn and "bolt for it". He must not exert himself too much in this, and indeed he will not be able, for the safety-suit will already prevent this. The dog, again on the short leash, will naturally wish to fling himself on the fugitive with all his might and



Fig. 436. The dog reaches his place at the left side of the fugitive.

main. The trainer therefore follows with him, but does not egg him on to seize, but uses another word of command such as "stop him". He now teaches the dog to pass to the front of the assistant, and when there to stop him and bark, on which the assistant must stand still again, for the dog must on no account seize him. This is safer than showing the dog how to compel the man to come to a halt by seizing the lappet

of the coat, or to bring him to the ground by jumping on his back, or by seizing one of his feet as it is raised, Further too, this is not a matter for a service dog, but only for the protection dog of an unofficial amateur, and our old friend "William Sykes Esq". can bring an action for damages, for in spite of all the insecurity of the present

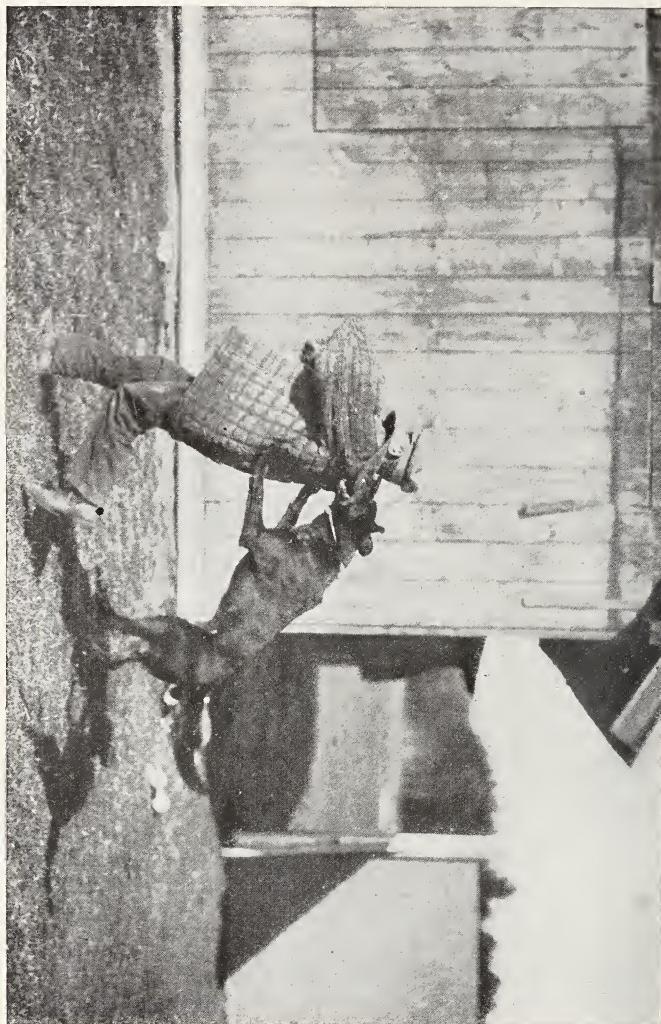


Fig. 437. Holding the fugitive by jumping on his back.

times, we are still supposed to be living in a period when Law and Order have something to say occasionally (!!!). In reality the affair will probably so turn out that the fugitive criminal, as soon as he feels the hot breath of the dog in the vicinity of his sensitive "nether tackle", will turn round against the pursuer, and will either submit to

the fact that for the time being his "luck is dead out", or else he will renew the fight with the dog, in which case he is once more the assailant.



Fig. 438. Holding the fugitive by seizing his leg.

These then are the duties which the protection dog would have to discharge against men. The further "man-work" combined with seeking (called "beating" in German service dog parlance) and barking,

or the pursuit of the one routed out, and the watching and escorting of one who has been arrested are duties of a service dog, for which we must not use our protection dog, who must never be trained to attack men.

There remains but one thing more which I wish to investigate, and that is the training of a dog to be sent in a certain special direction,—which is a preliminary exercise for the practice of searching,—because the amateur also must know the usual words of command to be used such as “go ahead”, “right”, or “left” to help in the other exercises.



Fig. 439. Routing out the loafer during a search in the country.

The dog is easily taught the meaning of these words when learning to fetch and carry. An object, which is not easily recognisable from a distance, is thrown on the grass in the desired direction, and the dog is led to seek in this direction, while the word of command is repeated. Scouring the country is service dog work pure and simple, and, as such, lies particularly in the province of the dog who accompanies the policeman, who thus often enough can occupy himself in discharging his duty to his neighbour, which is above all the work of the ambulance dog on active service.

Before I conclude my remarks on man work, I would like once more to utter a most emphatic warning against working the dog too much in this respect, and making him too sharp. Fighting with, and biting man is one of these "pleasures which can never cloy" for a good dog; it is a "real old chivvy" as they say in Vienna, and the Dr. Jekyll of the service dog gives way to the Edward Hyde of the descendant of the beast of prey. *The notion of "Man" should convey to his mind something sacred and inviolable. We have already founded the whole of his education from puppyhood onward on this*



Fig. 440. Finding the injured cyclist during a beat of the country.

principle, and he must only make an exception to this in the most unusual circumstances, and then too only on the word of command.

The protection dog must be sharp, but this sharpness must be disciplined by training, turned in the right direction, and conditioned by the most perfect obedience. Sharpness has absolutely nothing at all to do with proneness to bite; a biting dog is a proof of wrong training and keeping. Teasing, senseless irritation, being chased by stupid or evil-minded persons, the chain and the kennel, all tend to produce him. Indeed the biting dog very often bites out of sheer anxiety and irritation, for he believes, poor neurasthenic that he is, that this is the only way to save himself from the danger that is the fiction of his own disordered imagination. Such a dog is useless both as a

protection dog, and in the house, and the amateur must not bother himself with him at all. It is very difficult to mend his manners, and if he is a "panic biter", an improvement is scarcely possible. The dog too, who has been made too sharp, is a continual danger in the house and on the street, even for the relations and servants of the owner because he, when put on to any work, can find in every harmless

Fig. 441. Sheep Tending Trials of the SV held at Cannstadt 1912. "Passing the bridge".



treatment and casual movement, an assault on his master, and the sequel, while, doubtless perfectly right from his point of view, is not always necessarily in perfect harmony with our own.

The dog who is sharp as he ought to be, on the contrary, is harmless and good tempered even to strangers, although he is always reserved, no "lick spittle", and no "hail fellow well met" with the

"rag-tag and bobtail". He warns and threatens first of all, he does not fight at once, and, above all, never bites immediately and senselessly when he can accomplish his purpose without a fight. To train a dog too frequently on a man in the safety suit easily leads to this, and thus to sharp biting, because he has learnt this when practising with the safety suit.

It is always good for the owner to have a dog thoroughly under control so that he may keep him from misunderstandings and their consequences, and to accustom him to the word of command which will incite him to increased watchfulness in time of danger, either by "look out" or some other short word which has its own distinctive



Fig. 442. Service Dog Trials. "Gun sureness".

note and is different from the other words of command. *The motto for work on man, of any and every description is firstly, obedience, secondly, Obedience, and thirdly, lastly, and always OBEDIENCE.*

Training must give us dogs of the right sharpness, produced by intelligent keeping, careful training, purposeful schooling, which complete the work of the breeder, but the foundations must be already there. Training, again, depends on the service to which the dog is put, and on the perfection of the endowments of the parent animals through work; both go hand in hand to the benefit of the race.

I now come to the nose work of the dog, to the duties, the performance of which in our meaning, the dog must learn in virtue of

his principle sense, the sense of smell. There is no dog who does not possess this sense, if there were one, he would correspond to a man born blind, but with this difference, that from the very first the noseless dog is doomed to starvation, for he cannot find his way to his mother.



Fig. 443. Police Dog Trials. "Giving scent".

There are indeed dog races in which the sense of smell is more strongly developed than in others, and this is true too of animals within the same race, whose nose *appears* to be more or less efficient than that of their companions. I wish to emphasise the word "*appears*", for

we cannot thus dispose of the question with any degree of certainty, at least not at present, for the means to do so are lacking. Although every dog has a nose, and the shepherd dog generally has a very fine and sensitive instrument, yet in spite of this, as I have already shown in Chapter 2, there are so many dogs which break down in nose work. The trainer and the training are responsible for this, and not the dog himself. It is owing to the teacher who did not understand how to make intelligible to the dog the use of his chief sense in the sphere of the duties we expect from him. It is the fault of the leader who does not understand the capacity of the dog in this region, because he has not really observed the achievements of his four-footed assistant in this respect and has not fully grasped all the possibilities, nor drawn the right conclusions which would have been particularly useful to him



Fig. 444. Despatch dog under heavy fire.

of all persons. This "mis-fire" is to be attributed, not to the animal, but to the human element, for it is not that the dog is inefficient, but that the trainer is incapable of producing these hardly-won results. Rolf and his canine "Intelligentsia" would be "tickled to death" at a pundit who seriously maintained the possibility of such incapacity in dogs and they could indeed a tale unfold with many rappings, if they were only asked. No one, however, has ventured to do this as yet; can this be because no one has yet appeared who is sufficiently intelligent to know the correct answers to such questions beforehand? (!!)

When we attribute to one dog a good or a fine nose, and to another dog a bad or "short" nose, we are judging from our own human point of view, and wish to air our opinion that, in *our* sense of the word, one dog knows how to make good use of his nose, while another knows

less or nothing at all. We can indeed conclude from our general experience that all dogs do not possess sharpness of smell to the same degree, for the perfection of any sense depends on natural endowment, development, and experience. The painter distinguishes tones and differences of colour which escape the notice of the laity, while the connoisseur of wines and the tea-taster discern "nouances" of taste for which the tongues of mere mortals have no perception. Practice and experience have sharpened their eyes or tongues, and their nose as well. The dog who can, and must, from puppyhood make a thorough use of his principle sense, or again, the dog, who has grown up in the free and open country, will undoubtedly be superior in the use of his nose to the dog kept in the kennel, the town, or indoors; and this too, not because the nose of the poor town captive, insulted by the foul air of the town, and assailed by the "frowst" of the smoking room, has deteriorated, but quite simply because he has lacked the opportunity to use his nose, and to form and sharpen his mind through nasal experiences. The rearer and the trainer should therefore so direct their teaching that their pups and young dogs from the very first shall be given ample opportunity to use their noses, while the breeder must make it his special consideration to breed as much as possible from parent animals, known to have good noses, because these endowments are inherited like all other characteristics. This special breeding of fine-nosed dogs for the perfection of our breed is of the greatest possible importance.

The nose generally, even with one and the same dog is not always in the same condition. External influences, a dry or a damp atmosphere, heat or severe cold etc, the condition of the body, excitement, low spirits, and the state of health affect it. Our sight too is not equally good at all times; the sun dazzles us, a keen wind or the cold causes our eyes to water, and a chill influences them too.

The nose leads the wild dog to meat and marriage, the two essential goals to which all life tends. Generally the domestic dog is not troubled with commissariat worries; on that account therefore, the demands of love are the more imperative, yet even he, comfortably lined as he is, will gladly add, as something extra to his diet, whatever his nose causes him to trace out as eatable in the yard, the lane, the field or the stream. The air wafts continually to the dog who is at liberty the most varied scents, and relates to him all kinds of information about his neighbourhood. To him as he lies quietly there, it happens, as it did to us in those happy, happy days when we sat and joked at our favourite table in dear old Berlin. The nose continually procures new impressions for him as he roams about, even as someone who strolls along at his ease, feasts his eyes on the glories of one shop window after another.

Therefore, and yet again, though it be *ad nauseam*, out with the dogs, old and young, pups and parents, one and all, *out with them*. Let them have opportunity to use their noses at liberty, to make them more sensitive and to acquire experience. Kennel breeding, and kennel keeping will never give us dogs with efficient noses. The man who

brings up a dog must not remain placidly content with that which Nature had given to her young dogs, he can himself take them in hand and educate them so that he can accustom them to really use their noses. This can already be begun with pups by making them seek out something which has been thrown in front, or some pieces of food lying hidden in the grass, to which their noses and not their eyes must lead them, while their old familiar toy, the wooden ball can also be used for this purpose. Further, the owner can lay on the playground of his young dog, or somewhere outside, a short trail of smelly meat, ripe cheese, or best of all, of old herring, which possesses an irresistible attraction for the nose of every dog. Such a means of attraction, whether wrapped up in paper, or simply tied to a cord, is to be drawn by the trainer at first over a short distance, and later on over a longer stretch, sideways here and there — this can be done even by a stranger — and finally the piece which has been trailed is “câched” under some leaves, and then he must observe how his young dog behaves himself, when he hits the trail by chance. Finally, when the dog is playing, and not paying particular attention to him, he must hide himself and make the dog look for him. For this, he will place himself against the wind, so as to allow the scent to be borne on the breeze, but later on he will place himself to leeward, so as to compel the dog to ferret round and work on the tracks with his nose to the ground.

The dog combines, as I said in Chapter 2, both seeking out and keeping to the track. When he “seeks out”, that is when running to and fro on the ground to scour over a district, the dog hunts out a scent which is there, and which he follows to the end, or which indeed he gives up for other reasons. But scent can be conveyed to him on the wind as well. He will then in a high wind dash directly to the giver of the scent, or else, directed by the wind on to the track, he will work it out, and according to the strength of the wind, this will be done more or less on the track itself, or to leeward, that is sideways to the track.

The scent on the track with which the dog comes in contact in his work, generally clings, as we saw, to the ground, or to its immediate covering. From this, the gaseous scent streams out in minute waves. How strong it is, how high it rises, how far it goes, and how long it clings depends on air pressure, warmth, humidity, and the direction of the air currents*.

We saw further in Chapter 2 how to distinguish, in the art of seeking, between the “high wind seeker” and the “track seeker”. How “deep” or how “high” the nose is held, during this process depends partly on its efficiency, but especially on the age of the track, and the height at which the scent is found to be strongest; that is either right on the ground or above it. The dog consequently when in the open country, and in a strong wind, will not immediately work on the track itself, but will sometimes work on the side or to leeward,

* For further information see “Verbrecherspur und Polizeihunde” (Criminal tracks and the Police Dog) by Dr. Fr. Schmidt, Verlag (Publishing Office) of the SV).

and can also be led right away from the track if the wind is blowing violently. He must then seek it out again by prowling round, and thus put himself right on the track once more.

Drawing the track is the particular method of seeking used by the wild dog, and also by his domesticated posterity and heirs. Every dog thus works in this way, first ferreting round and then tracking the prey, which indeed does not prevent him occasionally using the high wind also, and hunting by sight alone, like the larger wild beasts.

The real "high wind seeker" or better still "high wind drawer" used in hunting is the product of artificial breeding. For our use of the dog, it is mainly a question of track drawing, and yet of high wind seeking too for the police dog when picking up the track, and for the Ambulance dog as well when seeking the wounded. We will here, deal only with actual track drawing, and working on the track.

The often repeated expression "track drawer", or better, "trail drawer" must not lead us astray to a wrong use of the word. Only those wild animals who draw on the ground such as roe, red deer, and pig leave trails. They leave behind themselves trails as stalking signs, and when they are seriously wounded these trails become "red" trails. All the other animals on the other hand, belonging to small game, also beasts of prey and man, leave behind tracks, that is visible foot prints and a scent, interspersed not with "red" but "sweat" traces. In speaking of the track, we speak of "warm", or "fresh", "cold" or "old" tracks. It is generally taken for granted that a track that is over two hours old is cold, but this indeed can happen under circumstances either very much earlier, or later according to wind, weather, and the nature and formation of the ground. It is a matter here of a rightly understood, or hazy idea from whose narrower limitation and determination, the actual power to track differs in practice. The dog "takes up" a "track", and "works" it "out"; or he "tracks". I have already thoroughly explained in Chapter 3 that he always takes up the track in the right direction towards his goal, and I have explained why he does this. A dog "scents out the track" when he follows with his nose close to the ground, and when he "searches for" and "searches out" for himself the place where the crime, it may be, was committed, by the tracks which were left behind, and gives up high wind seeking. Under "scent", we must include objects belonging to man or beast which are on the ground, or which have come into contact with them — scent carriers — and which leave their particular scent behind. Each kind or race has its own particular scent which belongs in common to all the members of that race, and there is also the personal scent of each individual, which again through special circumstances, such as illness, drunkenness, hard work, or fear can be altered or intensified. "To give scent" to a dog means letting him take up on the ground, or on a track, the particular scent of that which is to be sought from a carrier. If the dog takes up this scent as he should, he "scents". A track can be experimentally made and scented with sharp smelling or clinging stuff. A dog, on the other hand "is scented" when the master binds himself to him with his

own scent. The dog "works" on the track either on the leash or free, but "seeking" proper, means the work of ferreting round to pick up the track. Loosing or liberating a dog who is at work on the leash is called "slipping". To "lay on the track" means to make known the invisible scent of the track to the eye by external indications either at the starting place, or on the path of the track itself as well. If the wind during work on the track, blows from the front, the side, or the rear, the dog has a "head", a "half", or a "following" wind. An object to be sought lies against the wind, when the wind is blowing from the dog towards the object, the dog then has a "sheltering" wind, and on the other hand, he has a "leeward wind" when the wind comes from the direction of the object. "Barking", or better, "Giving tongue" means the bark which the dog gives while seeking, as a sign that he has found the man or object for which he has been looking, and "reporting", on the other hand, is the return of the dog, when working free, to his leader to lead him forward to what he has found. This reporting is the more difficult of the two duties which it is the aim of the following exercises to develop.

It must not be doubted for a moment that dogs can also discharge these special duties which we place before them and their noses. The man who owns a service dog need only in this connection avail himself of the experience and the knowledge of the hunter. As already said, it is especially difficult to some leaders to work a dog on the track, because every particular activity in connection with "nose work" is outside our ken, and many therefore have quite a false idea of what it really is. What Nature has withheld from us, we must try to acquire by example and experience. This experience is not gained by poring over books nor by the sophistry of the arm chair, but only by consorting with a dog, and by a loving and thoughtful observation and a penetration into the inner motives of the animal's actions, which is intent and keen on obtaining a grasp of causes and their effects and which regards the dog not from our human standpoint, but learns to identify itself in closest rapport with the dog's nature. "All theory, dear friend is grey, and the glorious tree of life is green" we read in Faust, and that truth we must ever keep before our eyes when working with dogs. Because we recognised the nature of the dog as founded on his instinct for a master and joy in activity, we must also make use of these two powers to the uttermost when working on the track; and there as always, we shall make the best progress if we pass gradually from the elementary lessons to those that are more difficult.

The easiest nose work for a dog is to work on the track of his own master. Every dog has already done this countless times, and done it faultlessly, and done it too as something which was "all in the day's work", and child's play before he takes this up in his schooling. Children also have already made letters and pictures with slate and lead pencil long before they go to school. But we wish too to bring the dog on the way through these exercises, which are so easy for him, that he may discharge more difficult duties in our service afterwards;

i. e. to seek out a strange track, to follow it, to find what is lost, to recognise similarities in scent, and to acquaint us with what he has discovered.

The clerk at the counter, who wishes to test the banknote to see if it is genuine, must have a general idea of this note in his eye, and must be able to visualise to himself its external features. This picture has imprinted itself on his memory with certain small details to which he resorts in discovering a forgery; but if he wishes to discern it somewhat more clearly, he must perhaps have recourse to the description and the picture of the forgery. Let us now transfer the simile to the dog with whom the nose is of greater importance than the eye. Its use is something to him on which he can rely, he knows how to point out the hidden tracks and he has also learnt to seek them out for himself and to follow them. He also knows the picture of the "bank-note". If we wish him to seek out a special track for us, we must make it known to him, not through the eye, but through his own chief sense, the nose. We must also introduce to him the scent of him whom he is to seek out, and we must at the same time incite him on to seek. The most familiar smell to a dog is the scent of his master, and the instinct which drives him to his master facilitates for us the task of explaining to the dog the duty of seeking. The scent of his master, held before him, rouses this instinct and compels the dog, of his own accord, to resort to his master; we therefore only need to use the word of command at the right moment, which should prepare the dog for the duty in the future "and there you are"! But indeed it does not all proceed with such clockwork certainty, for there are yet all kinds of things to be observed, but when everything is done from the beginning, quietly and in proper sequence, and sufficient time always devoted to this valuable work it is indeed no witchcraft to educate for oneself a careful tracking dog. We must never forget that plenty of time must always be available, and that the work must not be scamped. Reliable nose work cannot be crammed up in a fortnight or a few weeks. Something similar *may* be built up on other motives of action, but it will not be on love, but on hate, and the result is only a miserable imitation, which, though it may suffice in make-believe work on the regular practising place, must inevitably break down when it comes to service, real, proper, and in earnest.

I have here several times used the expression "to give the dog the scent", it would be very much better to say "to allow" the dog to *take* the scent". This technical term unfortunately has come into general use, but I could not neglect the opportunity of attempting to drive out of the heads of trainers all recollection of "giving the scent", and all the more insistently to emphasise, and to substitute for it, the phrase "to allow the dog to *take* the scent". In talking of "giving", there is already an implication of compulsion, but in this exercise all compulsion should be ruled out as much as possible, and this is to be especially remembered in anything to do with the dog's nose which is far too sensitive for such treatment. If we only give a cursory glance, we are able at first to see

nothing right, but when rather we take the trouble to read with a loving interest, we begin to see light in the darkness. To "give the scent" would always recall to the dog the memory of active compulsion, the pushing under of the head and of the nose, the hindrance to the breathing etc., and every repetition of this "giving the scent" will lead to a treatment which is far from pleasant, and against which the dog will be up in arms, if only he shows it by some inferior and undemonstrative protest. The result of that would be that he will not at all accept this scent, offered under compulsion, or at the best, not in the same way, and with the same sharpness as when opportunity is afforded him to take it up of his own free will. How then are we to accomplish this voluntary taking up of the scent in the dog? That is "child's play". An ordinary article of use that is well impregnated with scent, best of all an old slipper belonging to the master, is held in a coaxing way and at the same time the word of command for nose work, a drawled, fairly loud, enticing "go s—e—e—k" is spoken and repeated. The dog's nose will eagerly scent the shoe in memory of his absent master. As the shoe is gradually placed on the ground, the dog's nose will also be coaxed there too where the owner has already made some tracks as he went out. Here the finger is set, and, generally with a repetition of "go s—e—e—k", points to the eagerly sniffing dog the way on which a track has been made visible to the human eye. And now, Gentlemen, show me the dog who will not lay himself forward on the tackle, and drag his deputy leader the very shortest way to his master. Generally when the shoe is offered to the dog the inner part must not be submitted to his notice. Dogs sometimes have an inherited dislike to all hollows, because snakes and other unpleasant surprises can lie hidden there. We must therefore wait patiently to see whether the dog himself considers it necessary to take the scent in the interior of the shoe. If he does not consider it imperative, we can conclude that the external part of the leather is sufficiently saturated with the scent of the foot.

I have just made use of two new expressions "the deputy leader" and "the tackle". An assistant is necessary for all nose work. When it is a matter of following on the tracks of the master, the assistant must act as the deputy leader, and take over what otherwise are the special duties of the leader. This first assistant for practising nose work must be a very intelligent and conscientious man. For schooling the dog on the tracks of his trainer, one of his relations *may perhaps* take over the duties of the deputy leader, but such a relation is master in a very limited sense of the word only. It would also only cause distractions and aggravation, while with a leader who is an absolute stranger, the instinct to find his master by means of his scent is all the greater. There is nothing to be gained in using tackle, and I would not recommend the wearing of breast tackle for nose work, for the above-mentioned reasons. *The dog, when wearing the breast tackle, is not under the control of the trainer, the dog will only drag him about all the more after him, and this at all times is the "good*

bye" to all good nose work. Oberwachtmeister (Police Inspector) Böttger who was formerly the chief trainer at the Government Breeding and Training Establishment at Grünheide, warns us against tackle on this account, because a tug on this drags the dog, who is



Fig. 445. Strap work, on the track.

lying too far forward on the tackle, right off the track, while a dog which is leashed according his instructions, has his head kept on the track all the time. Böttger insists that for work on the leash, the long leash with the ordinary leather collar is the best, and a spiked collar can

be kept for an impetuous dog, but a fixed and not a swivel ring is to be used. The collar is so pulled forward that the ring does not lie as usual on the neck, but under the throat. He then takes the leash between the forelegs, under the breast and belly, and keeps it there, before it comes out between the hindlegs, by a loose thin body strap (a thin piece of string will answer the purpose just as well) fastened on about the region of the loins*.

We therefore should have what is most important for working with a dog on the track, the long leash, or "the leather strap" as it is called for this purpose. I have already said above that the dog on the track works either on the strap or free. This is not the place to discuss whether work on, or off the strap is more useful in service. The views of experienced men on the subject are very divergent. Let this, however, only be said in this connection that occasions can arise in which, under all circumstances, work must be carried out on the strap, but again, there are other cases when the dog must be free from the very commencement, in view of the conditions prevailing, and finally, considerations can exist in which the dog must be on the leash, then slipped and afterwards work free. *Working free then can only possibly succeed when the dog has learnt to work quietly on the track, step by step, with his nose close to the ground, and without storming off. This, however, he can and does learn only on the strap.* Therefore work on the strap, industrious work on the strap, which must also later on be always repeated for the testing and the correcting of the dog, is an indispensable foundation for all work on the track which is to hold out any prospect of success. *No dog must work free on the track before he has thoroughly acquired the habit of quiet, attentive work on the strap,* and before the trainer has sufficiently grasped his dog's methods of work and the signs which he gives.

When this has been accomplished, the transition from work on the strap to work when free should be gradual, and to a certain extent without the dog noticing the difference. The leash is to be held ever more and more loosely, till at last it is not attached to the ring of the collar at all, but drawn through it in such a way that the trainer, when the opportunity arises, will slip the dog, which thus becomes free during work. If he begins to storm ahead and to play the fool, he must at once be put on the leash again, for the strap alone makes it possible for us to teach the dog how to work correctly on the track, to test him for faults and to correct them.

During work the dog must show the leader by his behaviour whether he is keeping to the track. Dogs do this in different ways, one does it by dragging forward-(there are very keen, impetuous, and sometimes very sensitive-nosed dogs, whose enthusiasm must be curbed), another dog will stop on the track in a most expressive position — where the scent is more perceptible than in other places —

* See for the training of tracking dogs the very valuable "Anweisung zum Ausbilden von Suchhunden für den Ermittlungsdienst" (Directions for the instruction of tracking dogs for Detective Service) by Polizei-Obwachtmeister Böttger, 1st Edition, 1919, published by the S. V.)

and snuffle about there somewhat on the ground, as well as in the air, while another conveys his sentiments by a short bark, or by the play of his ears. The majority of them do it with the tail. The keen seeker has indeed not very much time to spare for tail wagging; a short wagging of his tail, or a particular carriage of the tail are the outward signs, which, however, cease as soon as the dog has become uncertain, or has gone off the track altogether, but he begins once more as soon as he has regained his certainty. The trainer must be alert to notice to notice signs, and, when they are shown, to praise the dog, for they form the wireless connection between animal and master which will facilitate the work of the latter. *We must therefore thoroughly realise that in service and in work it is our duty and not that of the dog to attain the goal. The dog is only an assistant, which makes*

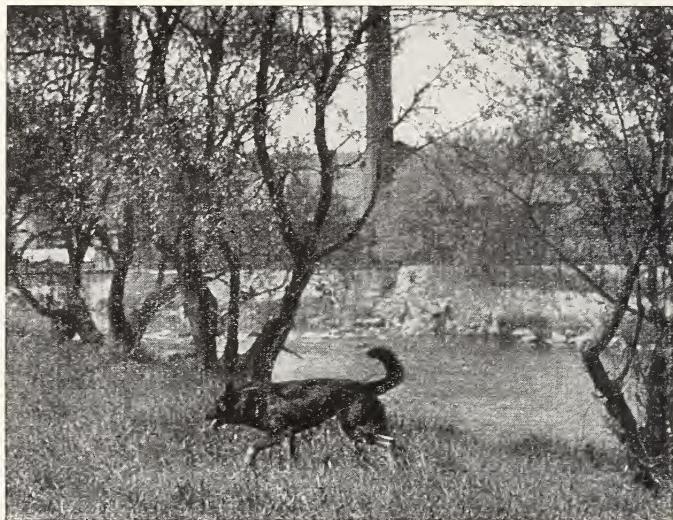


Fig. 446. Working tree on the track.

it possible and facilitates this for the leader. Therefore we service dog men must take to heart what Forstmeister (Chief Forester) v. Raesfeld has written about the seeking of the hunting dog which makes most exacting demands on both dog and hunter. "It is not the duty of the dog to lead the hunter, but the hunter must lead the dog. When this is the case, they combine to solve the most difficult problems of big game shooting; i. e.; the orderly, successful tracking of wounded game". In this connection v. Raesfeld obviously does not wish to say that the hunter in this sense of the word, should bring the dog to the place of the wounded game, already known to him, for if he knows the place previously, he does not require the dog, and could rely on his own "*personal inspiration*", but *simply that the leader's powers of observation and experience in the work of the dog must be in evidence so that he shall*

be able to interpret correctly every sign given by the dog and to form a correct estimate of them in the discharge of the duties. That is only possible when dog and master work together in the very closest cooperation, and it is only work on the strap which secures this, for this hammers it into the understanding of the dog that, *in track work, dog and man must unite to form one indivisible whole.*

Unfortunately so many leaders make so many mistakes in this very respect. They proceed to their work without sufficient preparation, without thoroughly mastering the duties to be discharged, and from the very first give false advice and help to the dog, contenting themselves with service which is more apparent than real. Some are really proud when the dog on the trial ground plays off his piece "according to plan", and drags them after him in the search for some object already laid out, or even when he does it wrongly, or when he storms out, off the strap, at a quick "seeking gallop" and plays a little game on his own with some man or other who is really not "in the act" at all. Even when such dogs have luck and really find, their accomplishment is only a fluke on their particular "day" which falls to the lot of every dog, so we are told, and gives no solid guarantee for reliability in service. *There are even leaders of service dogs who, with insufficiently trained dogs and without an expert regard for the duties of Detective Service, venture on tracking work, which only an experienced leader can accomplish, that is, one who is a reliable trainer, who has grown with his dog, and at the same time has enlarged his experience of the requirements of Detective Service and also has the power of estimating rightly all the other impressions which come to his notice during work on the track.* The use of such an uneducated dog, and such an inexperienced trainer gives raise to the fairy tale that dogs cannot keep to a strange track, and have not the power to distinguish between the various kinds of scents. It has led to the assertion that on the not-to-be-denied and numerous occasions on which dogs had correctly worked on the track, and proved the possibility of the "impossible", that, at the best, a chance and contributory self-deception of the trainer had been of some assistance, but that generally this was conscious on the part of the trainer, and that the leader had set the dog on the supposed "criminal" and that by nods and winks had led him to the right house, and that "the Sykes" in question out of pure friendship for the official, and disinterested love for the police dog had instantly owned up to his deed, and had maintained his assertions when officially examined about it. Now such assertions furnish their own contradiction, but here is not the place to deal with them more particularly, or to refute them. What has been said before should most insistently make our leaders realise that working on the track is no child's play, neither does it admit of anything but the most scrupulous work, and that it shows the high water mark of canine efficiency for every dog, whether he belong to an amateur or to an official. This should further serve to warn against the employment of a dog or of a leader on such work, unless they have grown up in it together.

Because correct tracking work, which is yet so easy in itself is so difficult to some people, some ingenious persons have naturally come to the conclusion that all kinds of means can be employed to facilitate it. The obvious course from the human point of view, and one that appeared to be inevitable was to use some sort of compulsion on the eyes of the dog by putting on "blinkers" (!!!), to impress on him the necessity for using his nose. Perhaps something in this direction could be accomplished with slow-witted, short nosed dogs like pugs *et hoc genus omne*, but even with them the effect of such aids would be to make them even more apathetic, if possible, and more indifferent than ever, and they would proceed to record a dignified protest by lying down and refusing to budge. A dog who has any life in him and anything approaching a nose at all would only be spoiled by such treatment. He would make it his one special aim and sole ambition to rid himself of the irksome compulsion, and would have no mind or energy left to discharge the duties of seeking, indeed they would only be thoroughly detested by him in recollection of the drudgery and the weariness, while, even at the best, weeks would be lost in habituating the dog to the process, during which time, an intelligent trainer would already have made considerable progress on the right and natural lines. I was compelled about 10—12 years ago to be a spectator of such a soul-destroying proceeding, since when I made up my mind never more to have anything whatsoever to do with such methods; yet, for all that, evil devices repeat themselves only too easily, for they are profitable for the inventor. Therefore, away with all such blinking contraptions for work on the track, material or mental, and let us use industrious and intelligent training instead.

For this we wish to emphasise a few general rules. *From the very beginning, the dog must only be worked on the leash:* and he must never be given the scent, he must rather be allowed to take it, as I have already said. All haste, disturbance, and excitement are to be avoided, for they pass over to the dog, and handicap the reliability of his work. Rough handling and wrong treatment — mental as well as physical — scare the dog, and only distract him from his duties, and even warnings and punishments are to be used with the greatest circumspection. *Man work is never to be joined with tracking work,* the one spoils the other. If both must be practised on the same day, they must, under all circumstances, be commenced with nose work, and man work can only then be proceeded with as something quite different, after other exercises have been interposed. Different people must always be chosen as assistants for the two exercises. We prefer ill-clad people for man work, and, if possible, they should be evil-smelling, and we shall therefore reject such for track schooling, and choose an assistant out of our own circle of acquaintances, already because an especially acute understanding must be exercised in this connection.

It facilitates the work on a strange track very much if these helpers at the beginning are made to bear a strong scent. When working on the track of the trainer, the assistant becomes the dog leader,

and must have a full grasp of the duties to be carried out. When schooling the dog on a strange track, the assistant must also help the trainer, by a most punctilious carrying out of his directions, by leaving behind him traces on the track which will be visible to the trainer, and by a correct behaviour towards the dog. The wind must also be taken into consideration, and the tracks must be laid that the dog, if possible, works with a directly following wind, so that he must concentrate on the track scent, and never on that of the high wind.

The laying of the track must be done with great care and precision, especially at the commencement of the schooing. At the beginning of the track the track layer — who must always wear old boots — must remain standing for some time at the starting point, so that his scent will be especially strong there. He then must proceed forward with shuffling steps that are not too long to a particular place — which the tracking dog must eventually show his leader — making deep marks on the ground, so as to leave behind for the leader a sign which is easily visible. Obviously this shuffling must not be too pronounced so that a visible track will remain behind everywhere. On this account work in the snow and on soft ground is to be omitted. The dog from the very commencement is to be habituated to use his nose at certain regular direction points, such as trees, posts, corners of buildings etc. which are always to be taken on the side which is seen in front, so that the leader of the dog knows whether the dog must track to the right, or to the left. As the exercise progresses, the track layer will change from shuffling to a gait which glides more over the ground and finally to an ordinary gait. After he has gone straight on for some distance, he must make gradual and then more pronounced curves, paying constant attention to the direction of the wind, — so that the dog never obtains a high wind scent from him, — at last he must make sharp turns, of which a good visible sign must be left behind for the leader of the dog; then follow gliding steps, making several circles with a continuation of the track in another direction, returning on the track, and similar aggravations of the difficulties of the track. Then a strange track must be laid alongside the track proper, which at first runs close and parallel to it, and later on breaks off in another direction, while crossings of the track by other strange tracks, and at different intersecting angles are also to be made. Finally, the layer to the track take off his boots while on the way and proceed further bare-foot, or else exchange his boots for another strange pair, but good care be taken beforehand that he does this standing, and without remaining too long in one place. The work on the changed track can at first be facilitated for the dog by the track layer walking with one foot bare only, or only wearing one strange boot, but after a few steps both feet must be the same; so that the dog will thus find himself at home more quickly on the altered scent. The soles of the boots can also be scented with strong smelling stuff, turpentine, paraffin etc. while on the way, and again in the same way indiarubber or wooden shoes can be substituted on the track. The track can also be interrupted by long jumps, climbing

over a wooden fence or a wall, at the same time with further scrambling along the top of the wall; and jumping from thence to another place, also by a change of direction, the use of stilts for a short distance and by wading through the water. Obviously the length of the track will not only be in proportion to the reliability of the dog, but also the age of the track as well. If at first, it has been begun with quite short distances of 50—100 yards, and on a track quite fresh and warm, the distance must be gradually increased and the starting time of the track layer arranged earlier, till at last the pupil comes to tackle tracks which are miles long, on a cold scent, and is successful without.

All these added difficulties must only be made when the dog is absolutely reliable in the previous exercises on the track. They must be thoroughly discussed and arranged between the layer of the track and the leader, so that he will afford the required assistance to the pupil, and so be able to facilitate the learning and the acquiring of his stock of experience. That is indeed the chief consideration, even as our children must also learn different kinds of writing, both written and printed, before they can read everything fluently. These exercises — these directions hold good for working on the track of the trainer as well as on the strange track — cannot be made too frequently and too varied. The more carefully the dog is prepared, and the more he can acquire permanent experience, the more carefully will he work later, when called on to work in grim earnest, and only through such varied and diverse exercises, can he be made not only reliable and persevering, but faithful to the track as well. These exercises are indeed very instructive for the trainer too, for he thus learns to master the meaning of all the duties to be discharged and to observe his dog, till finally the assistant himself becomes an instructor and a real coadjutor, nay, more, a real controller of the work, who thus affords the ideal help *par excellence*. Then with the advance of the education, which naturally is not accomplished in a day, but requires months, and must never be entirely given up, the afore-mentioned prearrangement between track layer and dog leader can be dispensed with, and the leader himself will have entirely new duties to discharge, and then both dog and master can show how much they have really learnt.

Naturally, working on the track must, from the very first, be taken in hand in the country. The usual exercise place had better not be used for this, and if possible, from the beginning, virgin ground, or ground which is seldom walked on must be sought out, also a neighbourhood where the dog will have as little distraction from his duties as possible. High grass is to be avoided in practising, not only on account of the injury to the field, but also because the track in the high grass becomes too visible, and affords too excellent a place for the retaining of the scent, and this not so much on the ground as on the tufts of grass divided and moved here and there by the foot. We have also here no clear, sharp, track which is necessary for the beginner, but one that is vague with much scent from the air, and therefore with additional strong smells. Dogs also as a rule do not like to have their noses tickled

by the grass and therefore hold them high, while the beginner must work close to the ground. Closely cut grass is excellent, when it has not been "newly kissed with dew", nor watered "by the gentle rain", — or freshly manured. This manuring must also be carefully looked out for in other places, because many stuffs are found in dung and manure which impair and spoil the scent. The track remains but poorly on dry, hard ground, just as on stone, while in deep sand it will be covered over as the sand is blown about. The ground in a wood, as a rule, is most suitable, for the covering on the ground there is not high but close, or else there is moss which retains the scent well. Granted that there are strong counter attractions through the tracks of game, (though to day, in many, indeed in nearly all districts, it is almost extinct) we always work on the strap; the leader thus has the dog absolutely under control and can soon take him in hand to correct him. If the education has made sufficient progress, it is indeed very useful to allow such distractions on purpose, so that the behaviour of the dog in these circumstances can be tested. It goes without saying, of course, that the trainer, when he uses fields or grounds, will come to some arrangement with the owner, or those who have the hunting rights, so as to avoid all unpleasantness and damage, and this must be especially the case with later exercises when the dog is working free.

Let us finally now speak of the time when practice should be undertaken. The early morning hours would be very suitable, except that the dew is heavy on the ground; naturally no exercises must be undertaken during the hot midday hours of the summer; and so we are left with the later morning, the afternoon and the evening hours till the dew and the dusk begin to fall, as the best times. The hours of dusk as the night is falling are generally very suitable for training a dog to the use of his nose. When the tracking work of a dog can be really relied upon, he must naturally be exercised sometimes also at night so that both dog and leader may become accustomed to such work.

We have already seen in Chapter 2 how the weather exercises an influence on the temperament of the dog, which has a great deal to do with his tracking work; during the time of these exercises there will also be excellent opportunities for observing the mood which is predominant. No exercises at all can be done when the snow is on the ground, or when it is raining. — when we are working in earnest of course we cannot choose our weather but must make the best with what we have and be thankful it is no worse, — strong wind also is not favourable for schooling when it is a matter of working in the open country. When in country that is very much divided up, care must be taken, for the wind, especially on the ground, often catches and eddies, lightly rising and falling by bushes and buildings, while a following wind under certain circumstances can also become a contrary wind which can cause the dog to make mistakes in spite of all precautions. By means of a lighted pipe or a cigar, the trainer can easily test the direction of the wind, but he should do this at a distance corresponding to

that of the head of the dog from the ground and not to that of his own; if no other means is available, it is sufficient to damp the finger and hold it up, when it has a sensitive skin.

As I said above, we base the nose work most easily and most appropriately on the dog's instinct for his master and for work. Both accordingly must find *their reward at the conclusion of the work*. With all work on the master's track, this comes quite automatically, the dog finds his master at the end of the track, or with his help he finds an object which had been lost and which he brings again to his master. When on a strange track, the dog works with his master, which is already a motive for joy, for his master at the same time makes the tracking as easy and as convenient for him as possible. At the end of the track, however, there is a stranger; and the "inward satisfaction" and the great (?) consolation of the philosophic that "Virtue is its own reward" does not satisfy the dog at the beginning. The "inward satisfaction" must be given an outward and visible relish by the trainer, by means of praise and tangible reward; but this must never be done by the assistant who must disappear altogether from scene as soon as he has been tracked down. In order to gain the reward, the dog must become accustomed to always find from the very beginning whether it be a man or an object; the leader is there for that very purpose, or the deputy leader is there on the track of the trainer.

The one who lays the track, be he the master himself or the deputy, must give no manner of assistance at all. He must remain at the end of the track, as if he had nothing more to do with the affair, he also must not attract the attention of the dog to himself by means of gesticulations, or by his voice. Above all, when he is the assistant, he must keep his body quite still, after the dog has succeeded in finding him. Then he must first thoroughly take his scent so that he may satisfy himself as to the identity of the scent on the track and on the man, and must announce the same to his leader, while a sudden movement at this time would only incite the dog to seize the man. If the trainer himself lays the track, he must restrain himself and not immediately begin to praise the dog, but should first allow him to nose him, and should offer him his foot for this purpose. In order that the dog as he approaches may not immediately recognise his master from a distance by sight, it is useful if he turns his back to the track and wears for this work, at the beginning, a suit with which the dog is not familiar. The work on the track of the master should indeed be no more than a preparation for work on a strange track, and therefore, all as much as possible, must be done with this in view.

The dog must be taught to bark as a sign that he has "found" on tracking a man. This he will do on finding his master out of pure joy, without any further ado; if he forgets to do this, he must be made to bark. When on a strange track, the leader will demand this of him and this will be simple barking and not baying to a stand. This barking on finding we call "denouncing" because the dog on service thus gives expression to the fact that he has established the connect-

ion between the man and the scent on the track on which he has been working, because the man and the track bear the same scent. When working on the track in service, this barking of the dog takes the

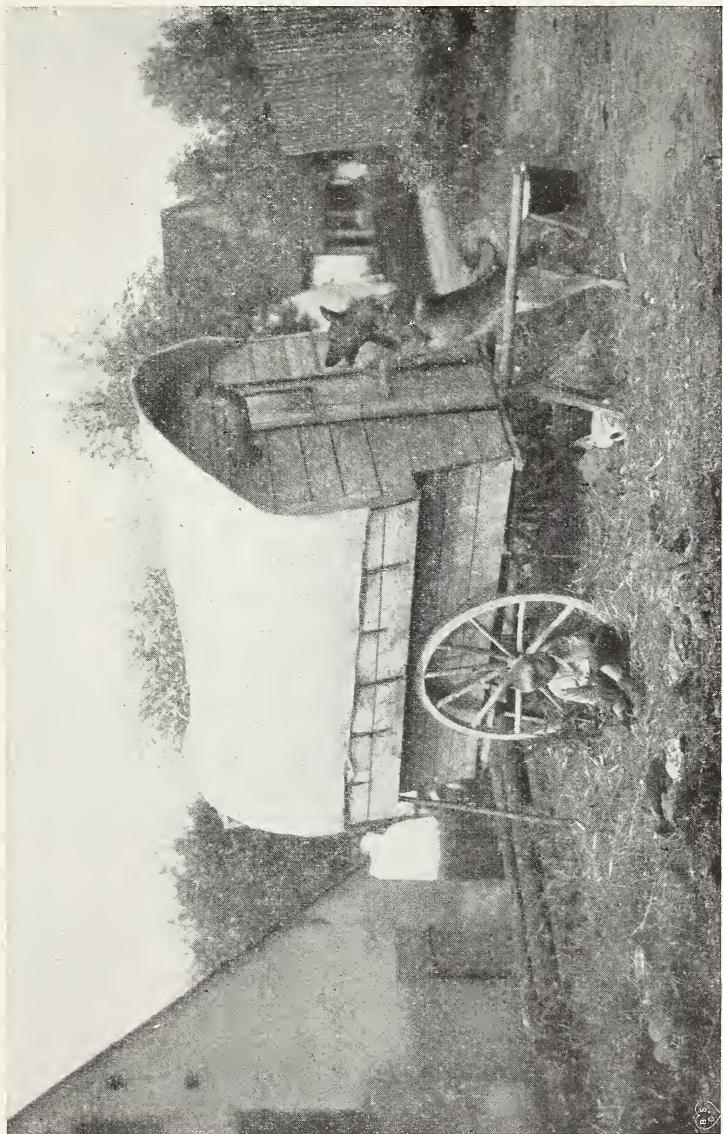


Fig. 443. Working free, at the end of the track, the dog announces to his leader his find by loud barking.

place of the "denouncing", that is to say, that the man has been worked out to the place of the deed, because he took up there the same scent and has worked it out till he "found". Whether the man who

is found and denounced is also indeed the committer of the deed or whether he had not some other reason for stopping at the place of the deed, further investigations must establish. The work of the dog is, as already often said, only a means for the discovery of the perpetrator. If, along with this denunciatory barking, the dog shows an inclination to be somewhat sharp, and to bay to a stand still, it is better to forego this vehement indication, — certainly from the very first, with all impetuous dogs who are prone to seizing and fighting — and to be content with another intimation that the identity has been established between the track and the man found; such as sitting in front of the man, or an energetic wagging of the tail. The experienced trainer, who really knows his dog, recognises at once by his behaviour whether he is positive about his work or no.

The dog is to be brought to the track prepared for work, i. e. already wearing his working collar, and on the strap. When on the track, he should have nothing to occupy himself with but the scenting. I have already said above how he is to be allowed to take the scent. A change can be made later on in the means of conveying the scent, instead of the boots, the dog can have offered to him for smelling another object which is thoroughly impregnated with the particular scent of the object to be sought, or this can be laid on the ground at the commencement of the track. The boot which carries the scent of the foot will best facilitate the schooling. After the dog has learnt in this way to connect the meaning of the scent carrier and the scent on the track, the scent carrier can then be taken away. The dog is then shown the track at the place where it begins, and must take up the scent there. Later on this is also dispensed with, and the pupil is brought to an untrodden starting place, and must seek out the track for himself by going over the ground. How, that is to say, in which way the dog takes up the scent is a matter of indifference. The leader sees by the play of the nostrils, and by the movement of the head whether the dog scents and takes up the scent. I would not advise that the dog be laid on to take up the scent, for that in itself is a form of compulsion, which, as we saw, must always be avoided in this respect, for it would give the dog a distaste for his proper duties. If this is to be done, the dog does not simply allow himself to be laid on by the nose to the starting place or on the track, he must first of all be dragged and pushed to the place, which is made known to his eyes, and will then feel ill at ease, instead of throwing himself into his duties with zest. If, after taking the scent, the dog does not move forward on his own initiative, the trainer must encourage him, when he is satisfied that he has a thoroughly good idea of the scent; this is done by saying "go—s—e—e—k!", or "forward", given in a drawling tone, as indeed is the case with all the words of command when working on the track.

Track work must proceed slowly, the strap should be held loose, and not taut. If the strap were stretched, the trainer would continually hinder the dog, and could, by a sudden movement, draw him off the track. The dog too must not drag the leader after him on the

taut strap; that would soon be unbearable for both. The gait of the dog, whether on the strap or free, should be such that the leader can easily follow, and devote the whole of his attention to the work of the dog, and, during later work on service, to the ground alongside of the track. This he is unable to do when he must run along behind a flying dog, and has in consequence to look out where he himself goes so that he does not fall, for the track in service does not always proceed over conveniently smooth ground. In the country the trainer can often find still other valuable signs for the following out, or the identification of the man sought for, which lie outside the scope of the work of the dog. Hence the extraordinary importance of slow tracking work when on service.

If the dog storms along the track, the trainer must habituate him to quiet work by holding him back and by repeating "quiet". If this does not avail, he must make the dog lie down to calm him. I do not recommend overmuch speaking to, or praising the dog during work on the track, he is already fully occupied with his duties, and words from the trainer would only distract him. If the pupil does not show himself amenable to persuasion to quiet work, when working on the track of his leader, (in his anxiety to follow his master), he must soon be transferred to work on a strange track, after he has grasped the first notions of taking the scent and picking up the track, when the attempt to set the dog on an older, less warm, or cold track of his leader does not succeed in procuring the desired result. This remedy, i. e. work on a track that is older, and no longer fresh, is naturally also to be used on a strange track when the dog insists on haste there too.

While the dog is taking the scent, the leader holds the strap short and lets it slip slowly through his hand, at first not too far, but later on to about 5 or 6 yards. This is the average length on which the dog is to be led, and if the occasion demands it, a little more of the strap that is wound up, can always be paid out. The strap, during work on the track, is always held in the left hand, and should be slack, but not trailing on the ground, so as to disturb or hinder the work. The attentive leader will prevent this by a timely drawing in when necessary.

When setting on the dog, the leader must not tread on the commencement of the track so as to make possible the laying of another track on the track itself. In following the track also, he must, as much as possible, leave the track undisturbed, at least at the beginning of the schooling, so that the dog, when he is first set on, will have the right track and nothing but the right track; later on such care need not be taken. The leader will then, because he leads on the left, keep himself somewhat to the right of the track, but not too far away to be able to recognise its marks. At anyrate, if the dog, when only just set on, has two tracks in front of him, one beside the other, (the real track that has to be sought out and the track of his leader for the time being), that will be no help

to him, because he will have no scent for it, and the leader is by him at the same time.

If the dog gets off the track while at work, he can, when the starting place is not too far away, be brought back again, and set on afresh in the same way. Reproofs, scolding and punishment are always to be avoided. If the dog breaks off at a place further on the track, the leader must lead the dog back again to a place on the track itself. He will thus learn to know how his dog announces his re-discovery of the track. The dog must later on learn to seek out again for himself the lost tracks by searching for them over the ground. For this, the strap is held shorter, and the dog is led at first in narrow, and then in gradually expanding circles, while "go s—e—e—k" is continually repeated till he shows that he has again found the scent. At the commencement, his nasal memory can be refreshed by holding once more before him the thing which conveys the scent which, if it is the boot, the leader must carry with him, but he must be careful that he does not impregnate it with his own scent through thoughtless carrying, which would cause the dog to make mistakes in the discharge of his duty. Later on, when the dog has a thorough understanding of what is expected of him, such great care need not be taken, for the dog is now very well able to distinguish the difference between a strange scent and that of his master. If when on service, it is at all possible to bring along such scent carriers, this should be done by all means, for the nose memory of the dog can thus be refreshed over long distances and when in difficulties.

If for any reason whatever, the dog must be taken off the track during work, with the idea of returning to it later on, he must not be forcibly dragged away. The leader rather must "lift him off the scent" that is by praising and coaxing him away from it, with the left hand held under his breast, and carrying or leading him about 10—15 yards to the side of the track, when he must be made to lie down. On resuming work on the track, the dog is once more set on at the place where he broke off in the usual way. If a scent carrier is at hand, let him have a sniff, to renew his scent memory.

I have gone into these general counsels rather in detail, and in many cases have exceeded the scope of my real purpose, which was to deal with the education of the amateur's dog to become an efficient escorting and protection dog. But I am of the opinion, and I believe that all real lovers of shepherd dogs will agree with me, that our dog can never learn too much and that for this purpose there is nothing better or more desirable both for master and dog than this very nose work, because it is capable of such variation that man, as well as dog, will never exhaust its possibilities. Is there anything, when walking in the open, more conducive to real intercourse than thus to occupy oneself with one's friend and companion? Volunteer assistants for this, both grown ups and children are always to be found in one's circle of relations and friends. If the dog has at first been thoroughly worked in, so much insistence need not be laid on the punctiliously correct help of the assistants, as would have been

the case otherwise. On the contrary, if they do make mistakes, the dog and his leader must prove themselves, and show what they have learnt.

I now come to the various exercises in the use of the nose with which I can deal briefly, because what I said before in dealing with them as a whole applies to them separately.

With reference to working on the track of the leader, after what I have already written, I have nothing more to say. I would not advise that the leader should go away in sight of the dog; his



Fig. 448. Strap work on a strange track.

distress at seeing his master go on ahead would be so acute that it would overcome all other sentiments and make all instruction impossible. The deputy leader must naturally not be a total stranger to the dog, for a good shepherd dog would have no time nor use for his assistance or his commands; it is much better then to choose a good friend who is well known to the dog.

When working on a strange track, the trainer himself takes over the leading once more, and in this connection too, all that ought to be said has been already said. As the first means of conveying scent, a boot that has been left behind by the assistant can again be used.

He indeed must be in possession of two pair which are well impregnated with his scent; though generally a slipper will do equally well. If working on a strange track presents special difficulties at first, these can be made more intelligible to the pupil. The assistant will make himself a drag. 's said before, of meat, cheese, or herring which he will trail behind him over the track by a short cord. After



Fig. 449. Working free, seeking for what is lost. The dog finds the object and takes it.

about twenty steps, he will lift the drag clear of the ground for a few steps; and will then allow it to trail once more, and finally he will make a few steps before the end and work the drag with the wind some considerable distance sideways. This is better than when the assistant himself scents the soles of his shoes as mentioned before, for he only succeeds in contaminating his own scent, and the very instructive interruption by the decoy scent is thus impossible.

If the dog works quietly and reliably on the track of his trainer, exercises for seeking what is lost can be proceeded with. The trainer does the leading and any other assistance can be dispensed with. The

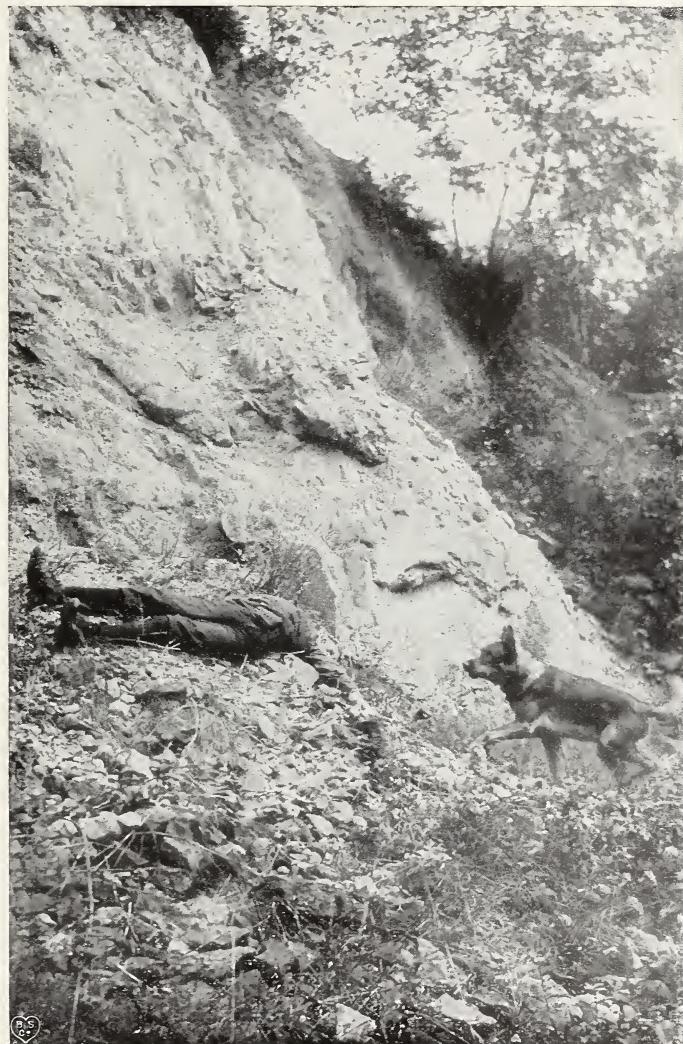


Fig. 450. Working free on a strange track, at the place of the accident.

dog must be made to lie down so that he cannot see his master; the master then proceeds to lay a track, that is not too long, in the usual way, at the end of which he "loses" an object which is well impregnated with his own scent, after which he returns to the dog by a circuitous

route. Anything which retains the scent can very well be used as the object, but it must not be of metal, nor anything that is likely to stand out from its surroundings by reason of its colour. It is best, at the beginning, to use a sock that has been worn by the trainer, or an old glove, or it can be a special scent bag,—see my remarks on training accessories —, which has been thoroughly impregnated by being placed in an old boot or stocking. The leader will then bring the dog on the leash to the beginning of the track, and will offer him his foot to smell and say at the same time “go s—e—e—k”, or the new word of command “lost”, which later on must be the only word used in these circumstances. The leader then follows the dog who goes in front, held short on the strap; and as soon as he stands close in front of the lost object, he uses the word of command “fetch it”,



Fig. 451. Working free, seeking an object that has been buried.

and makes the dog give up the object which he has fetched, in the proper way. The exercise is later on prolonged and made more difficult, and finally the dog must learn to work out the track backwards, beginning from the end, because that will generally be the rule in seeking for what is lost in real service. With a dog that has been properly trained, this will present no serious difficulties. As soon as the dog has obtained a thorough grasp of these preparatory exercises, the leader may proceed to train him to seek for lost objects, off the leash, — at first on the forward track — on which the dog indeed will generally adopt a quick gait because he goes on the familiar track of the trainer. In order that the dog may not accordingly become too much accustomed to quickness in working when free, this exercise on the track of the trainer must not be made too often, or else an old track, and one that has already become cold, must be selected, but

in this case no valuable object can be left lying out. If the dog returns when working free without the object, the trainer must take him on the leash and go to the place where the object was lost. If the object is still lying there, the dog must have a short course of instruction in picking up and giving up, and then a repetition of seeking for that which has been lost must be made on the same track with the dog on the strap, and the object must naturally be left there once more. Finally the leader will lose the object during an ordinary walk with the dog, unnoticed by him, and after some time he must send him back on the return track to seek. Here, at first, generally the dog will not go away very willingly, because it means leaving his master. In that case, the leader will accompany him a few steps, or else he takes the dog on the strap, and allows it to slip through the collar while the dog is working, as before described, at the same time encouraging the dog to go on seeking.

Seeking on a strange track is practised in the same way. The assistant, who returns from laying the track, goes with the leader and the dog to the beginning of the track, and allows the dog to scent his foot; this scenting of the foot must, later on, alone be used to convey to the dog the necessity for seeking; so that with a dog that has been well trained, there is scarcely any further need of a word of command. The assistant will not accompany the leader when the dog is working out the track, to avoid disturbing the dog in his work by the greater scent which is conveyed to him on the air.

The seeking out of hidden or buried objects is not the same as seeking lost objects, for indeed it is always the case of a trail to the hiding place. The scent remains there where the object is hidden, and is naturally especially strong, because the layer of the track has stood there for a somewhat longer time. This is especially important in the case of burying objects. The tracking of objects is then absolutely no magic at all, and no especially difficult achievement, as was formerly the superstition, for in this connection, the disturbance of the ground, and its altered appearance are familiar phenomena to the dog who is accustomed to scratching and observing such places when hunting small game. When practising here, it is necessary to make the dog notice the hidden or buried object in the proper manner, which can be done as already described. This hiding then will be practised not only on the ground, but the object which at first was more or less visible, will be concealed ever higher off the ground; and further scope is here given to the ingenuity of the layer of the track and the leader himself.

The verification of the scent correspondence between persons and objects can be developed out of seeking, without any difficulty. In this practice, the dog must, after taking the scent of the man, seek out on the track, without waiting, the object belonging to him from several objects lying on the ground, should take it up and bring it to the leader; or, on the other hand, after taking scent of the object, should pick out the real owner from several people by testing the scent,

and should announce the same to his leader by barking or by some other indication.

As a preparatory exercise, we once more begin with the seeking out of something belonging to the trainer, and then to the finding



Fig. 452. Picking out a man, after scenting an object belonging to him. The dog scents the different people.



Fig. 453. Picking out a man after scenting an object belonging to him. The dog finds and "denounces".

out of the trainer himself. The trainer lays a short trail to a number of objects already laid on the ground belonging to different strangers; there he will lay his property and return to the dog as usual. When

selecting an object for this purpose, it is best not to use the scent sack already known to the dog, (or else it must be laid out by itself), but some familiar object or other used by the leader, placed among those of the strangers. The dog, as always, is brought on the strap, which is not held too long, to the track and laid on to seek. If he wishes to take the wrong object from those laid out, he must at once be told "hah", the leader will once more offer him his foot to scent, and then will make him seek further over the place, and can, when necessary, point out the right object, and finally allow the dog to test the scent correspondence by holding out his foot and the object. For seeking out an object belonging to a stranger, the assistant must be at hand. In this case, no property of the trainer must be laid on the ground. When the dog has understood the exact nature of his duties, he proceeds from the working out of short trails to the picking out of objects which are laid out. The dog is taken a short distance away from the objects, he is given a good scent of the "owner", and is then brought on the strap to the objects and made to seek. At the beginning of the exercise, the objects must not be placed too close together, neither in a particular direction, nor order, but anyhow. Later on, the distance between the objects may be decreased, and at last, they may be stacked in a regular heap, from which the dog must seek out the right object. Naturally this is difficult, because the scent from the various objects has become mingled; and yet a thoroughly reliable dog who has been properly trained, can discharge even these duties, for cannot we too pick out from papers that are lying thick on each other, that which bears the familiar writing?

The picking out of a man from several others, after taking the corresponding scent from an object, is only another application of the same faculty. Every dog already has been obliged, times without number, to seek out his master in a similar way, we shall therefore soon be able to commence with working on a stranger. This too overlaps, as I have already said, a part of the previously described exercises, especially in so far as they come within the scope of the escorting and protection dog. The description of this and the further education in man work in all its branches, which is included in the training of the nose to ferret out, (that is the retrieving search after people and objects with barking and denouncing), and further, the education for detective dogs pure and simple, the War Despatch dog, and finally the seeking for wounded undertaken by the Ambulance dog must therefore be reserved for special treatment.

To beginners, it may perhaps appear that the demands made of escorting and protection dogs are high, and even too high. But, as already said, both dog and master have never ceased to learn, and at this present time when there are so many incapable and ignorant people in the world, we must make it our care and our pride that our dogs at least shall not be in the same deplorable plight. Our shepherd dog must rather, even when kept by an amateur, always afford in this, and all other respects, a brilliant example, and lead the van

to stimulate emulation, that (to invert the words of Mark Antony in Julius Caesar), judgment may return from "beasts", and men, at long last, regain their reason.



KENNELS.

"Out with the mother into the Spring air".
Old Berlin Proverb.



After having spoken so strongly against the evils of a kennel existence in the preceding Chapters, the reader may perhaps be surprised at seeing the accursed word "kennels" even in an appendix. Yet for all that the dog must have somewhere to live when he cannot always be with his master, in the house, or in the yard; and such a place is called a "kennel". The word is capable of very wide application, it can include any old corner of the yard, wired in and covered over with a few boards, or the most spacious building, "replete with every modern convenience" (to use the jargon of villadom).

A kennel in itself is by no means a curse, I am only opposed to the baleful effects of which it can be the cause. One of these is that

deterioration which overtakes a dog (when the first novelty has worn off) who is kept too much, or even altogether in one, and then indeed kennel keeping becomes an unmitigated tragedy. Another injurious effect is encountered especially when more dogs than is good for the shepherd dog nature are brought up together, and remain in a kennel, for to the tragedy of a kennel existence, is added the crime of dog farming and mass production. I have already done all I can to warn against this, but yet I feel I must take the opportunity to do it once more and again, for I love the German shepherd dog, and would do all in my power to keep both him and his friends from harm and misfortune.

When I was living some twenty years ago in Upper Bavaria, there was, unfortunately, no one to whom I could turn for good advice, and I built a wonderful kennel, according to my own well thought out designs, and proceeded to populate it, but when the dogs, in addition to the generous space always allotted to them, proceeded to consider the entire park, the fruit gardens and the fulness thereof as created expressly and solely for their purpose and pleasure, I became a convert to the bitter conviction that shepherd dogs must not be kept in droves, if the owner wishes to derive any pleasure from them, and they themselves are not suffer any harm by becoming wild. From that time on my kennel was conspicuous by its emptiness, and was only used as temporary quarters, as a place where bitches might whelp, and for the first stages of the pups' upbringing, otherwise it was "To let". I had also learnt another lesson, for since that time I have limited my dog keeping to what was necessary for my own protection, and to the further possession of two or at the most three dogs, and thus was once more able to enter into personal rapport with them, and to derive much pleasure thereby. From this time onward, I have never ceased to utter warnings against kennels, because I have also been able to observe the same terrible results with other well-meaning friends of the shepherd dog in their efforts at breeding.

In offering plans of a kennel for a shepherd dog, it is not my intention to persuade a new shepherd dog friend to immediately go and build one exactly similar, but that he should rather avail himself of the best of the details proposed in the various designs. The majority of dog keepers generally use one place for most purposes, both where the dog can be kept from time to time, and also where the bitch can whelp and rear her family. For a dog keeper who lives in the country, a good shed will generally answer the purpose, even as for the bitch when she whelps, or she will otherwise find out a place in a stable or some dark corner which can easily be fitted up for the occasion. It is, however, more difficult for the dog keeper in the town. Happy indeed is the man who has a house, yard or garden which he can call his own, and where he can partition off a sunny corner. Finally the man who is only a lodger must keep his dog continually in his rooms. To be able to do this without placing an undue strain on diplomatic relations, requires a landlady who is devoted to dogs, and servants, who at present are hard to find among the "house offi-

cials" of "New Germany"; if indeed an optimism, which refused to be dismayed at facts, can discover any at all; and yet, perhaps, to transpose the words of the poet, out of hyenas, we may in time develop reasonable women — if we faint not. Granted that the owner will arrive at a very intimate relationship with his dog, at the same time, if he has not an abundance of leisure which he can devote to taking him for long runs, it is not at all a suitable existence for a shepherd dog.

I will give, first, some designs for kennels which I made some time ago for the Berlin Police Authorities, for their Breeding and Training Institute as Grünheide. The open kennel for four dogs, which can naturally be adapted for one or two dogs only, and whose run can be proportionately enlarged, (which indeed must be enlarged when the kennel is used for breeding purposes), is the simplest form of kennel. The dog kennel proper, for which also two simple but thoroughly tried designs are given, comes next in importance. All elaborate kennels which are sometimes lauded to the skies or exhibited are not so indispensable when examined more closely. The descriptions given on the plans themselves afford all the necessary information. In place of iron T-pieces for the support of the wire netting, reenforced concrete posts have been used lately with complete success.

The kennel which stands in the open must at anyrate have as much shelter as possible against wind, rain, and even sun, by being placed near a building or a wall. At all events the opening of the kennel must not be on the weather side, while in the winter a moveable curtain, (a piece of sail cloth or sacking) can be hung in front of it, so that the dog will be able to retain in the kennel the heat that he creates. For the same reason, such a kennel must not be made too large, for the dog does not stand up in it, but rather lies down. The smaller the kennel, the quicker will it be warmed by the occupier; its length must correspond to the length of the dog's body, and the breadth must be such that the dog can lie down comfortably on his side, and stretch his legs at his ease. It need not be very high, for the dog creeps into his kennel, just as he would crawl into his hole in the ground. Before lying down, he turns himself round in such away that he is within easy reach of the entrance. The entrance too must only be as high and as wide as is necessary, and above all, should never reach down to the ground, for the dog already lifts up his legs when he goes into the kennel.

The best kennels have double floors and walls. The space between the floors and the walls must be packed tight with peat dust; the kennel itself must not stand directly on the ground, but on feet that are about 6" high. The roof must be detachable so that the kennel may be conveniently cleaned out as often as possible, and put out to catch the sun. Old casks which have been often recommended are already unsuitable as substitute kennels, because they are very difficult to clean, and the interior cannot be dried properly in the sun. The dog too does not lie on a level surface. Old paraffin casks are to be rejected on account of their smell.

I. Whelping Kennel.

(N. B. The original measurements were given in metres and centimetres, the translated equivalents therefore are only approximate, though in the majority of cases they correspond to within 1/16". 1 m = 39".)

This is generally of brickwork, covered within and without with cement, with all the sharp corners rounded off during the process of applying the cement. The floor in the interior must be of cement with a slight slope towards the drain. The woodwork must be smooth and have a coating of Carbol (before use the kennel must be thoroughly aired), the doors and windows are painted. For metal parts, avoid brass, iron will take a coating of paint. The door lock must easily snap so that even servants can securely close it; (people often forget to turn the key) it must also be such that the dogs themselves cannot open it; which, however, every dog easily learns. The best and only preventive is a spring latch fixed the wrong way round. On a door which has a so-called right-handed lock, there must also be a left-handed lock, set the wrong way, the latch of which must be raised to open the door instead of being depressed.

The interior height of the kennel must be about 6'6" on which a low top storey must be built in such a way that the roof is higher over the back wall, and falls directly forward, so that it is 2'6" or even 1'8" over the front of the kennel, J 1 J 2, and affords it a good protection from the weather. The plan gives only one whelping room (B 1) with the exterior of the kennel (J 1), but the length can be increased at will, in which case the general arrangements will remain the same (see B 2 and J 2).

A Passage behind the Whelping Kennels, with entrance door K 1; at the end of the passage is a cupboard for kennel accessories. K 2 entrance doors closed.

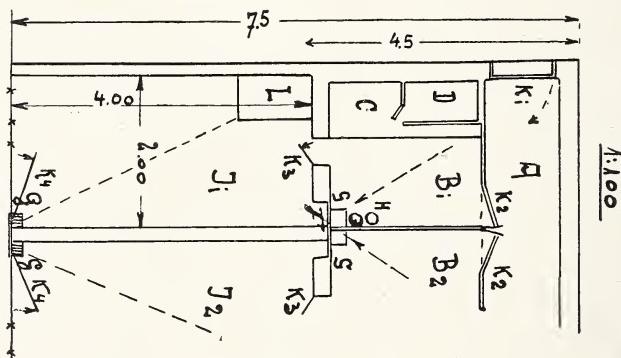


Fig. 456. Plan of a Whelping Kennel. 7.5 m = 24'4". 4.5 m = 14'7 1/2". 4 m = 13'. 2 m = 6'6".

B 1 and B 2 Whelping room separated by wooden partition.

C A ledge of planks on feet (about 4" of the ground) over a layer of peat dust, and enclosed by a board, see Plan VI.

D Whelp Box.

F Window lighting two whelping rooms, commencing 1'6" from the floor, the upper half of the window is made to open outwards from above, while it is protected on the inside by narrow-meshed wire netting.

G Drain with grid.

H Place for food, and water dish.

J 1 Exterior of Kennel, separated from the next kennel J 2 by a light wall. The enclosure is made of wire netting (see Plan III and IV) with a gate (K 4). The outside of the kennel is enclosed by wire netting (having a narrow mesh) so far as it is not covered by the roof. The dividing walls are to be brought right under the roof; while in front a height of 2'6" is sufficient.

K 1 and K 2 see under A. K 3 is a small sliding door to the outside of the kennel J 1. Height of the sill 6", height of the door 18". K 4, Wire gate to the outside of the kennel.

L Wooden ledge on feet 3" high, without a foundation of peat dust.

II. Young dog's kennel.

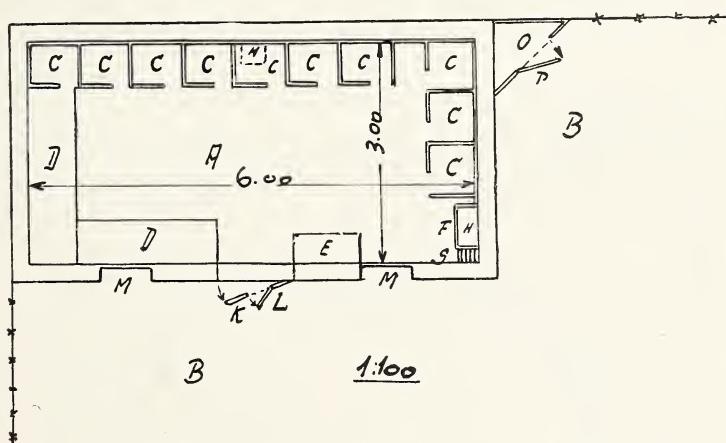


Fig. 457. Plan of a kennel for a young dog. 6 m = 19'6". 3 m = 9'9".

For general details see No. I.

A. Inner compartments, the sleeping boxes (C) stand on ledges as described in No. I, and resemble the whelp boxes, see Plan VII, but have no little doors. The opening for the door which is made at the end, reaches down to the floor.

B. Simple ledge as in Plan I L.

E. Cupboard for kennel accessories.

F. Drinking troughs cemented to the floor with overflow behind.

G. Drain with grating.

H. Water tap.

K. Entrance door with

L. small sliding door (as K 3 in Plan 1) so that the large door can be kept closed during frosty or bad weather.

M. Windows see Plan I F.

N. Ventilating chimney for foul air.

B. Run.

O. Corner partitioned off for Kennel accessories.

P. Entrance.

The run is cemented and well supplied with ledges, which are so arranged that they are shaded by the roof, or by trees planted outside the wire netting. The run must also be provided with hard wooden balls about 4" in diameter for the young dogs to play with, and also with gibbets on which cloth balls, well stuffed with straw, are hung about 1' to 1'6" off the ground to swing from side to side or fly up in the air when the dogs jump at them. The run is enclosed with wire netting, and a wire gate. The wire should be of a good gauge with a fairly large mesh. The netting (see Plan III and IV) is entwined with an upper and a lower supporting wire by binding wire. The supporting wires are drawn through the iron T-pieces and secured. These T-pieces ($2\frac{1}{4}$ " thick and 6'6" long) are sunk in a socket of cement, with holes to carry the supporting wires, 10 $\frac{1}{2}$ " and 6'5" from the bottom of the post. The T-pieces are to be 9' apart, and at the corners they are to be specially reinforced to withstand the strain and the tension of the wire. The wire netting (which must be 6'6" high) is bound to the stretched wires for about 2'6", the remainder, which is left free, is bent over, inwards, to an angle of 45 degrees and secured in this position by stretched wire. This prevents the dogs climbing over, even at the corners, for their unstable inner edges present an insurmountable obstacle to any dog who attempts to climb up the meshes. An iron gate, which can be obtained from a wire netting factory and covered with wire netting, forms the entrance; while its firm iron work serves for the attachment of the fencing, see plans III and IV.

III. Method of securing the Wire Netting.

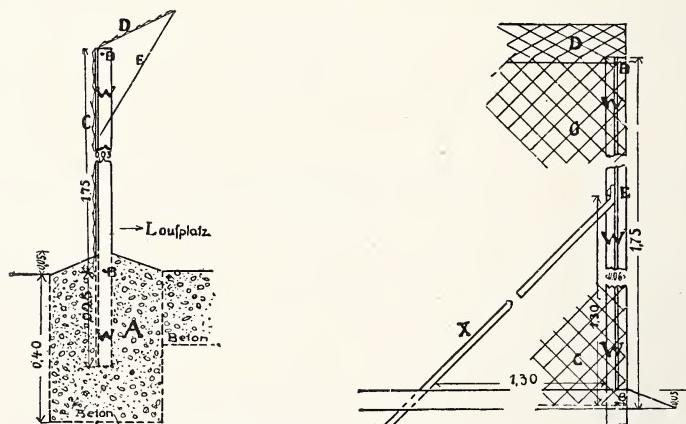


Fig. 458. Iron T-piece for wire support. 1.75 m = 5'8 $\frac{1}{4}$ ". 0.40 m = 15 $\frac{1}{2}$ ". 0.25 m = 9 $\frac{3}{4}$ ". 50 cms = 1'9". 0.03 m = 1 $\frac{1}{4}$ ". Laufplatz = Run, Beton = Cement.

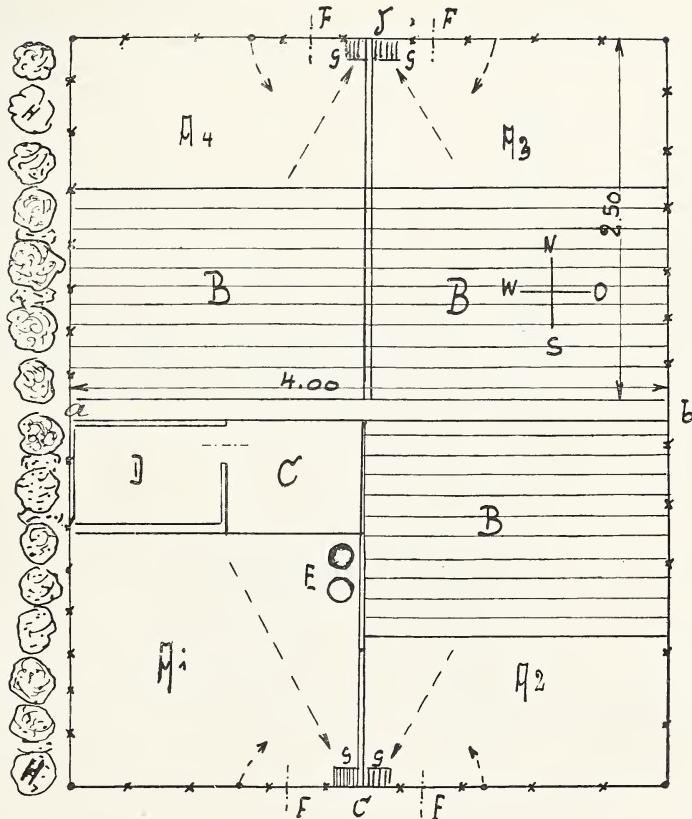
A. Cement hole to receive the post which supports the netting, after the netting has been fixed. This hole is finished off in a slope like a roof on the ground so that the lower stretched wire and the under edge of the netting are secured in the cement to prevent any burrowing under the fence.

- B. Holes bored for upper and lower wires.
- C. Wire netting attached.
- D. Upper part of netting bent inwards.
- E. Stretched wire for same.
- W. Wire support (iron T-piece).

IV. Method of securing the wire at the corners.

- A. B, C, D as in Plan III.
- X. Side stays composed of: —
- W. Corner supports.
- E. Screw attachment.

V. Open Kennel for 4 dogs.



1:50

Fig. 459. Corner Support for wire-netting. 1.30 m = 4'4".

a—b. Brick or reenforced concrete wall, 6'6" high.
 c—d. partition of the same material, or of corrugated iron. By means of these walls the four kennels A 1—A 4 are partitioned off into compartments, each measuring 6'6" by 7'3". The outside wall of these kennels is made of wire netting

v. Stephanitz, The German Shepherd dog.

(see II, III, IV) with four entrance doors F. The floor is cemented and slopes away slightly towards the drain with grid (G). A thick fence should be planted on the weather side of the kennel. A Sloping roof (B), of wood with asphalt roofing felt, (omitted over A in the Plan) falls away at the sides to a height of about 5'9". The outer walls (c-d) and the side wiring (which is to be stretched till it reaches under the roof), are arranged correspondingly. The place which is not roofed is to be covered with wire netting.

Each kennel contains a wooden ledge C (see Plan I under C) and a kennel D see Plan VII.

E Place for feeding and water dishes.

VI. Whelping box (sleeping box) for the inner compartment.

The whelping box, (also the sleeping box), has no floor, and stands on a ledge which is protected from the cold on the ground by a layer of peat dust

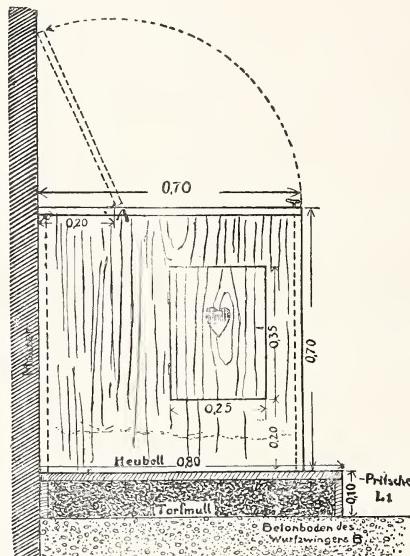


Fig. 460. Whelp Box. Mauer = Wall. Pritsche = Ledge. Torfmull = Peat dust. Betonboden des Wurfzwingers = Cement Foundation. Heubott = Bedding of Hay. $0.70 = 2\frac{3}{16}$ ". $0.35 \text{ m} = 1\frac{7}{8}$ ". $0.25 \text{ m} = 9\frac{3}{4}$ ". $0.20 \text{ m} = 7\frac{7}{16}$ ". $0.80 \text{ m} = 1\frac{7}{16}$ ". $0.10 \text{ m} = 3\frac{7}{8}$ ".

placed underneath. The four sides of the box are not nailed nor screwed together, the front and the back sides (which are shorter) fit into grooves which are nailed on the other sides, and are secured to them by hooks and eyelets. The cover is then screwed on to the side of the box which lies next the wall and is arranged to open and shut at A.

Thus the box can be easily taken to pieces, brought into the sun and thoroughly cleaned. The ledge itself is not to be made of one, but of several pieces of wood, so that it can be easily brought out of the inner compartment and cleaned. A door is only required in the case of a sleeping box, the opening of which is made in one of the side pieces, and reaches to the floor.

VII. Dog kennel for the open ; ground plan and section.

The kennel has double wooden walls which are planed smooth, well fitting and painted. The space between the double walls and the floors is packed

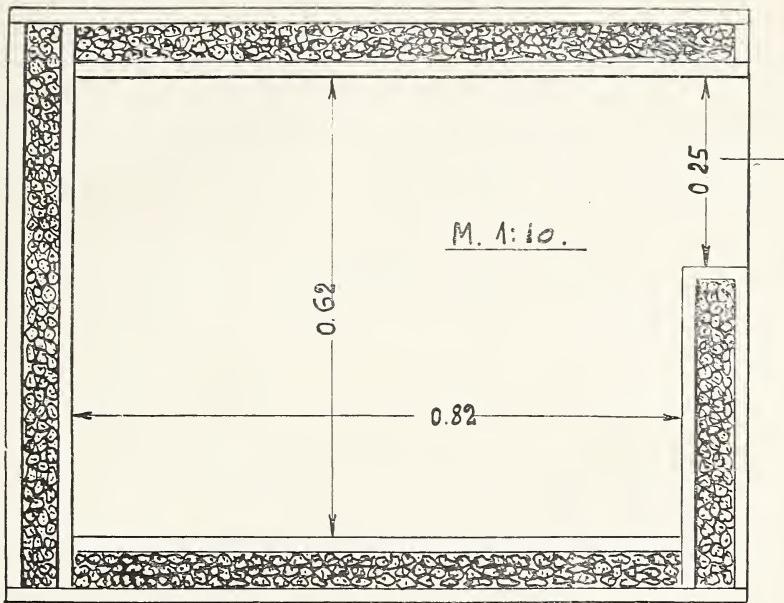


Fig. 461. Open Kennel for Four dogs. 2.50 m = $7'1\frac{1}{2}''$. 4 m = 13'. 1.50 m = $5'10\frac{1}{2}''$.

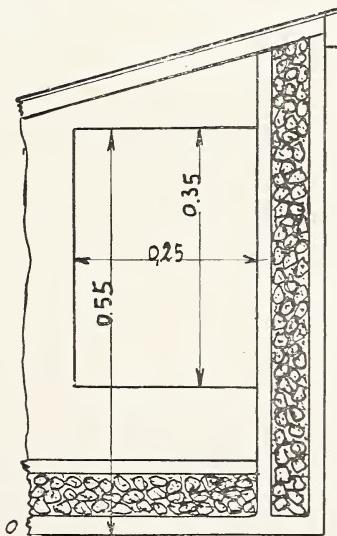


Fig. 462. Dog Kennel for the open (Ground plan). 0.62 m = 2'. 1.10 m = $3'6\frac{3}{4}''$.

tight with peat dust. When the kennel stands in the open on a ledge, it requires no feet, but if it must stand directly on the ground, it must have feet about 2" high. The place for the kennel must be so chosen that the opening is protected against the weather, and the higher side placed against a wall; The position of the higher side and the opening are to be determined by the way in which the kennel is placed. The roof, which is detachable, fits by means of grooves over the two sides, and is attached to them by hooks. The roof, which is covered with roofing felt or something similar, projects somewhat in front, while the opening can be protected in the winter by arranging a piece of sail cloth over it; any further enclosing by means of a door is not necessary. When it is desired to fit a door, (in order to shut up the dog sometimes for a short time), it must be provided with air holes and a button for fastening.

VIII. Kennel as designed by Th. Meerboth-Hamm.

To make the sides, frames are made from lathes ($2'' \times \frac{3}{4}''$); for other dimensions see No. 464). The frames are covered with boards $\frac{3}{8}''$ thick. The inner

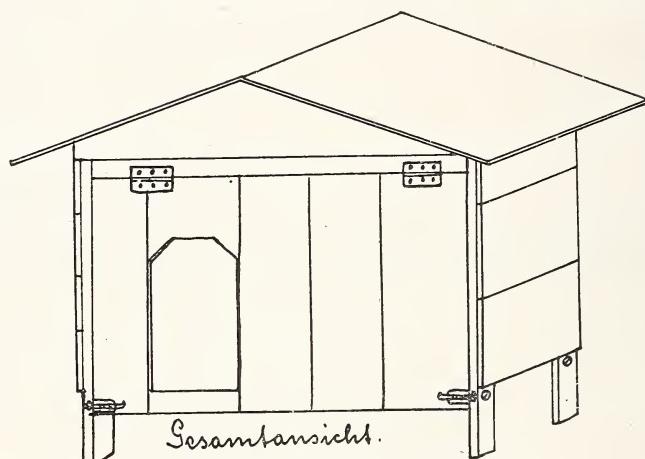
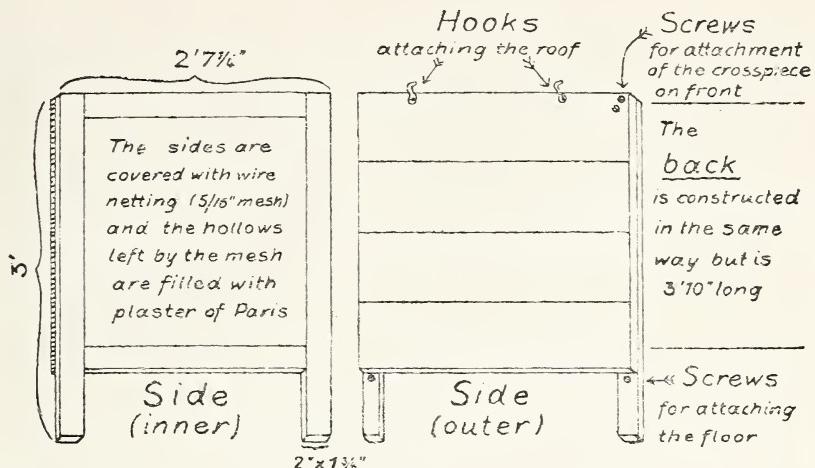
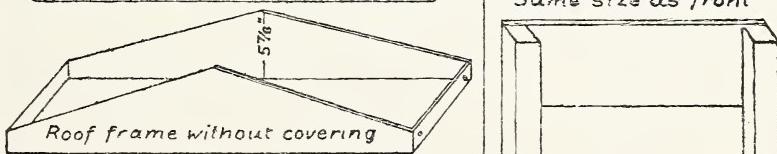
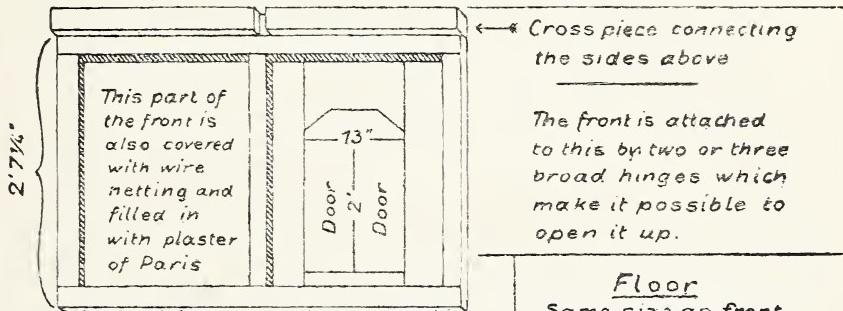


Fig. 463. Dog kennel for the open (front view). $0.55\text{ m} = 1'9\frac{1}{2}''$.

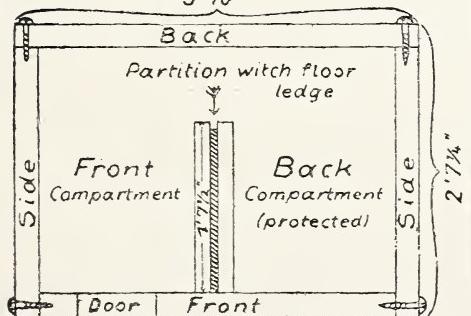
sides of these walls are then overlaid with wire netting (with $\frac{5}{16}''$ mesh), and the hollows left by the mesh filled up with plaster of Paris which has not been mixed too thickly. By this means, jointless solid walls are obtained, which are cool in the summer, warm in the winter, and keep out vermin. When dry, the walls are to be painted thoroughly on both sides. The illustrations give a detailed explanation of how the kennel is assembled. For this purpose only 14 screws (about 3" long) with round heads are required. Six of these are used to fasten the back to the sides, and four fix the cross piece for the front (above) between the sides. The front is secured to this cross piece by hinges, and can thus be opened and fastened up. The front also has bolts right and left for fastening to the sides. The roof frame must be a perfect fit on all sides, and covered with thick boarding overlaid with asphalt roofing felt, nailed on and well tarred. The roof must project at least 6" on all sides, while in front, if possible, the projection must be 8" as a protection against the weather when it beats in. The inner partition serves to divide the kennel into two compartments, in the hinder one of which the dog will



Front (viewed from inside), owing to the double thickness of the sides is of that amount shorter than the back



Ground plan
 $3'10''$



Floor
Same size as front

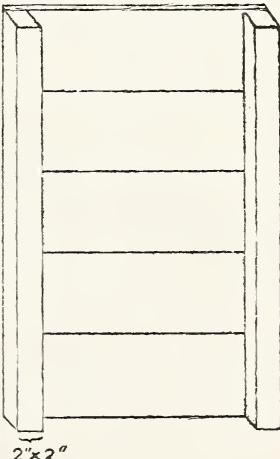


Fig. 464. Meerboth's Kennel. General view. (see No. VIII, opposite page, for various details).

lie absolutely protected from wind and weather. In winter, the back compartment can be further protected by a curtain of sacking, doubled and hung before the entrance. The breadth of the partition is $19\frac{1}{2}$ " so that the dog has a passage through of $11\frac{1}{2}$ ". The sides must reach as high as the roofing. If the kennel must be used for whelping, the partition is to be removed some time before the event. A frame made of boards 4" wide, and laid on the floor, with a clearance of about 4", gives the pups an opportunity to crawl underneath, and prevents their being squeezed to death against the wall by a clumsy mother.

From the plans which I have given, any dog keeper can choose, according to the requirements of the time being, for the bringing up of his dog, — I emphasise this "for the time being". The arrangements recommended are simple, but they meet all requirements, and what I have proposed I know to be good from actual experience. Anyone who knows anything of carpentry will be able to do most of this himself. *But let this be understood above all, and every time, let in as much sun and light as you possibly can, and avoid damp, especially on the floor.* Then indeed, with suitable nourishment as well, you will have no softening of the bones in your dogs, and also very little illness, except in cases where the germs have been caught from outside.

All rooms and parts must be frequently and lightly washed over with some disinfectant, such as hot water with soda, soft soap, Lysol, and lastly whitewash and Lysol mixed. This, however, is best for light brickwork and timber framing, because, in the interior, walls, the floor and the roof can be covered and made smooth with a plaster of fine cement. During the process, all sharp corners are to be avoided, and where they already occur, they are to be rounded off by the cement so that they can be easily and thoroughly brushed, and do not become dust, dirt and germ catchers. Such a thorough cleaning is not possible in wooden buildings, for which reason I am always opposed even to kennels that can be taken to pieces. Such detachable facilities have no point in a regular building that is exposed to the sun, it can no doubt be taken to pieces, but it can never be assembled together again in a satisfactory manner, because all has become swollen and warped.

Kennels and sleeping boxes, on the contrary, must be made to take to pieces so that they can be thoroughly cleaned out and aired in the sun. It does not matter very much if they become warped, when they are used as sleeping or whelping boxes indoors, for they need not be such a perfect fit, and hooks and eyes will do very well for fastening them together. For kennels that must stand in the open, only the roof must be detachable, which, when once more placed on the kennel, will fit sufficiently well by means of the grooves, or on account of its own weight; these kennels too must be always rainproof.

I have already explained the meaning of the locks in my demonstration of the plans, and also the importance of avoiding brass fittings. A coating of cement should always be used for the inside floors; every other kind of floor absorbs damp from the excrements, and wood

planking above all is most unsuitable for this very reason, while on account of the impossibility of cleaning or thoroughly disinfecting it and the joints, it forms an ideal breeding place for disease germs, and a headquarters par excellence for a branch of the ubiquitous society for the propagation of fleas. Far better than wood is clay, for it is harder, and can be dug out from time to time and renewed.

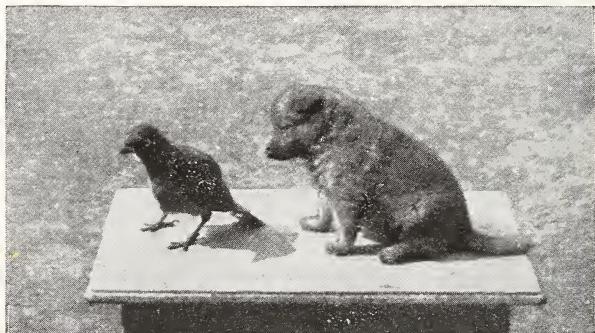
The run on the outside of the kennel must be all the greater in proportion to the frequency and length of time the dogs must remain there. Dogs will remain outside as long as possible, even in the rain, if a light covering for the boarding is available, and at the most will only go into the inner room at night to sleep — many will not even do this — or in the case of bitches, they will go in to whelp, or in the early days of their litter. Special attention therefore should be devoted to its construction, because, in addition, the pups will make their first attempts to run there. A floor of cement is also best here, but the layer need not be so very thick. I used to have it made about 8" thick, over a foundation of coarse rubble, and it consequently lasted a very long time without any deterioration. Such a surface is best for the development of paws, feet, and legs, while lying about on the hard cement no more injures a strong young dog with good hair than lying on any other surface, and finally a few planks should be provided with strips nailed on them to keep them off the ground, which can be laid over the cement as a protection against damp. A gravel surface is to be avoided for pups, for even when it is coarse, it, like sand, develops bad, weak paws, while a clay surface is impossible in the rain. A hard grass surface indeed would be very good, but it requires special attention, and dogs delight to dig and burrow. If the grass is not continually kept short, the pups will become thoroughly wet in rainy weather, and if the grass is kept short, it will be burnt up in anything like a good summer. Whoever wishes to provide shade for the run, had better plant it with quick growing trees. Pine trees are not suitable, they are very liable to be spoiled by overmuch cocking of legs, and by any other souvenirs that may be deposited on them for preference so long as they are young. At anyrate a thick hedge must be planted on the windy side of the run, and then everything that can be done to make it really suitable has been done, but let me once more repeat *the run is only a temporary expedient*.

Hay or straw can be strewn in the kennel, but it is not absolutely indispensable, for a shepherd dog with a good coat likes a hard surface.

Dogs who live continually in the house must be taught to have one special place, and to always know where it is. A mat can be laid down there, more as a means by which they shall recognise the place than with the idea of making it soft. I do not recommend the practice of providing a dog with a basket and a cushion. Both basket and cushion will gradually disappear by being made to serve as a means of relieving the monotony by the delightful and pernicious habit of nibbling, while pieces of swallowed cushion can cause severe

constipation. It is very much better to have a small kennel for young dogs, in which they can be shut up when necessary, especially at nights; in this way they will quickly learn cleanliness, and can come to no harm when no one is at hand to watch them. It goes without saying that during the day this confinement must only be *temporary*, and should be done as seldom as confinement in a kennel later on — for it would be an even more serious matter — and it is also obvious that the kennel must have air holes. I am “all agin” the various dog places which are offered for sale and recommended. In the last resort when all is said and done, they are, one and all, very little better than a springy piece of wire netting which is stretched round a frame and fitted with a covering. Of such a springy swinging bed most dogs have a very reasonable distrust, and much prefer to lay themselves by the side of it than upon it. Some dogs have a craving for furniture, but not all, and where it is met with, it is more on account of the warmth than the softness of that on which they wish to lie. Perhaps too they have this preference because they find the scent of the master there more than anywhere else, for most dogs only seek out such a place in the absence of their master, or else it is a piece of bad manners which was artificially bred into them.

In conclusion, just a few words about the chain which has a certain relation to the kennel and the dog's place, because he must be occasionally attached to it; *but that too must only be for a time*. A good chain must be made of light, nickelled steel links, on each end of which should be a spring hook with a swivel, there should also be a third swivel in the middle of the chain so that twisting is impossible. The fastening ring in which one hook of the chain is attached, (while the other spring hook is attached to the choke ring of the collar), should be as near to the ground as possible. If it is desired to give the dog which is chained up — especially if he be a watch dog — more run, the ring can be put on an iron rod which is fastened lies close to the ground. When chaining up the dog, care must be taken that he cannot come to a tragic and untimely end by making a jump over a low wall, or at a window and hanging himself in the process. Carelessness in this respect has already deprived us of many a trusty dog.



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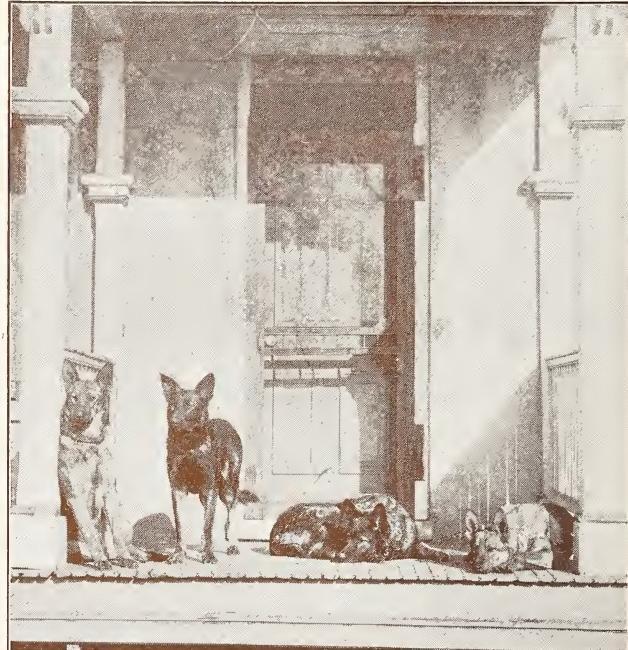
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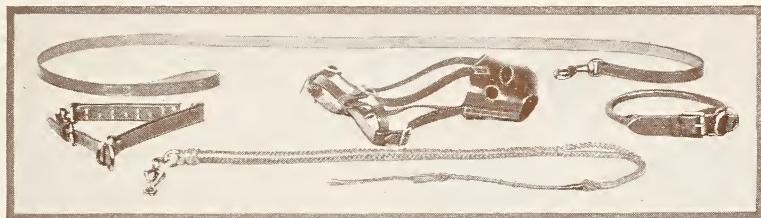
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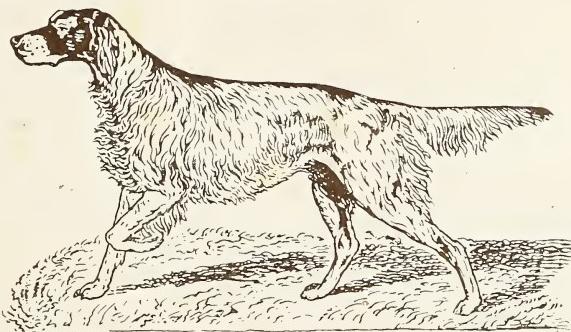
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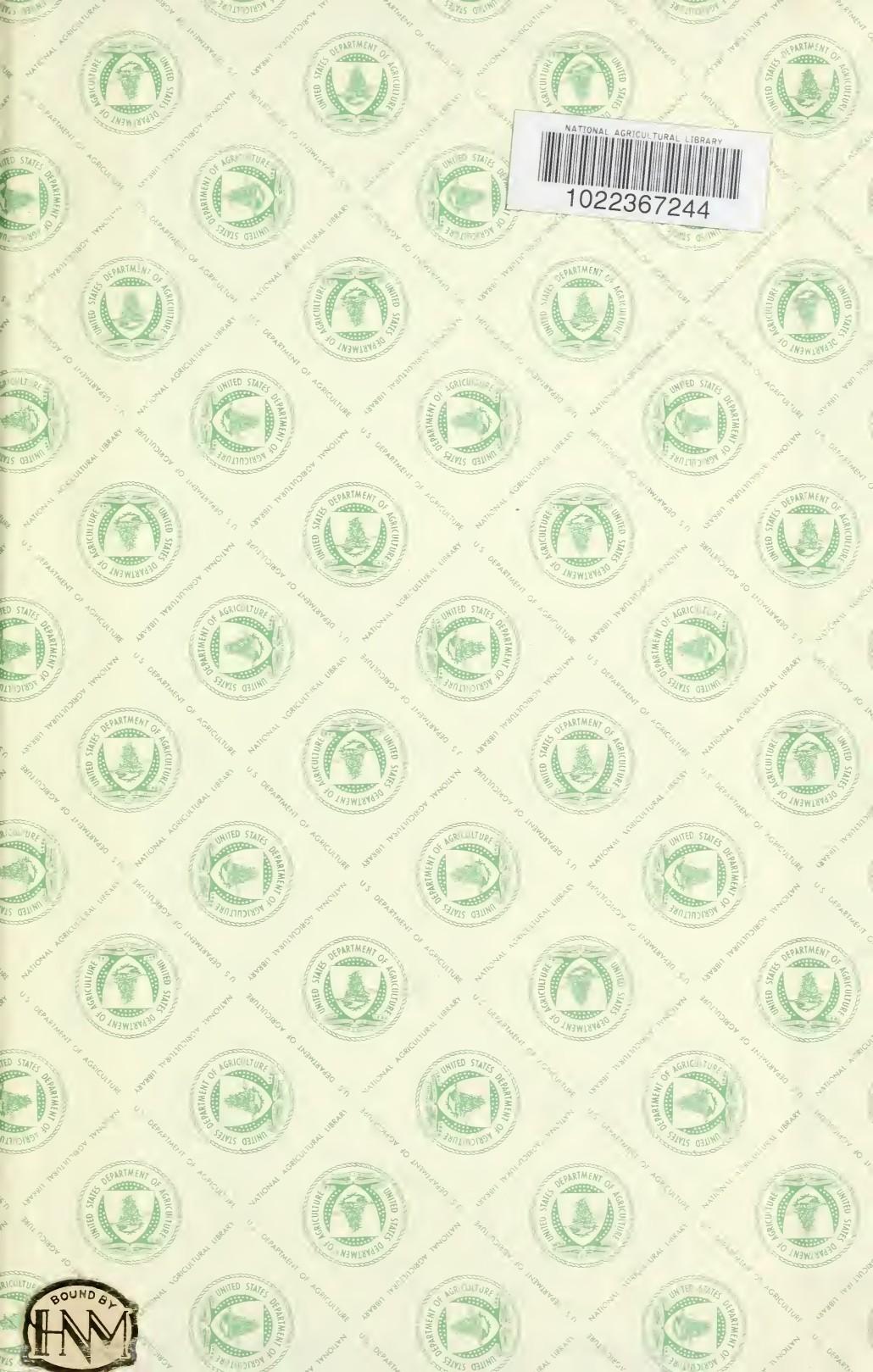
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